

A STUDY TO EVALUATE THE PERFORMANCE OF  
RECLAMATION SOIL COVERS PLACED OVER  
AN OIL SANDS FLUID COKE DEPOSIT

A Thesis Submitted to the College of  
Graduate Studies and Research  
In Partial Fulfillment of the Requirements  
For the Degree of Master of Science  
In the Department of Civil and Geological Engineering  
University of Saskatchewan  
Saskatoon, SK

By

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## ABSTRACT

Coke, a by-product of petroleum extraction from oil sands, is considered a potential energy source and must be stored within the reclaimed landscape in a manner that allows it to be recovered in the future. Syncrude Canada constructed two instrumented watersheds at the Mildred Lake Settling Basin (tailings management facility) to study the effects of coke in the environment. The watersheds consisted of a “shallow” and a “deep” cover system with nominal thicknesses of 35cm and 100cm, overlying an approximate 5 m thick coke deposit. The two reclamation soil covers were constructed using peat-mineral mix placed over secondary (glacial till).

The global objective of this research program was to evaluate the preliminary performance for each of the soil covers with respect to the available water holding capacity (AWHC). The specific objectives were to: a) install additional instrumentation to supplement the existing instrumented watersheds; b) characterize the properties of the covers on each watershed; and c) develop a preliminary, one-dimensional water balance for each watershed.

Existing instrumentation on each cover (installed by others) included: a meteorological station; automated soil stations to monitor suction, water content and temperature; and, lysimeters to collect net percolation. Additional instrumentation was installed during this research program to track vertical and horizontal variations in soil conditions and included: access tubes for monitoring water content; temperature sensors; gas sampling points; and, standpipe piezometers to determine depth to the water table. The instrumentation generally performed well, with the exception of the lysimeters which did not appear to measure net percolation accurately. Through the measurement of soil parameters, interpretation of field monitoring data and laboratory testing, the covers were characterized for their relative ability to store water for plant growth.

A water balance was determined for each watershed. Evaluation of the covers indicated that neither the deep nor the shallow covers were successful at storing sufficient water necessary for plant growth under dry conditions. However, the deep cover performed better than the shallow cover based on the overall cover performance, likely due to its higher AWHC.

## ACKNOWLEDGMENTS

The completion of this thesis would not have been possible without funding and support from Syncrude Canada Ltd., Suncor and Canadian Natural Resources Ltd. I owe many thanks to the staff at Syncrude for all of their help and guidance during the summer field programs.

I must thank my supervisor, Dr. Lee Barbour, for his never ending patience that allowed me to stick with it and finish this thesis. Your commitment, understanding, support and advice throughout my entire program were highly treasured.

I would also like to offer my sincere appreciation to all of the other graduate students and summer students that provided so much for me along the way. This work was only achievable with the assistance and encouragement of Heather Rodger, Chris Kelln, Sophie Kessler, Randi Strunk and Stephen Klemmer. My thanks also go to Alex Kozlow for all of his laboratory help and his ear whenever I needed to talk. All of you not only made my time more enjoyable, but you also became my friends.

My appreciation is extended to my advisory committee for pushing me to continue and succeed with completing my thesis, Dr. Jim Hendry, Dr. Chris Hawkes, Dr. Amin Elshorbagy and Dr. Lisa Feldman.

Finally, I would like to thank my family for all of their support and the giving of their time when I needed to work on my thesis. My sons, Jonah and Joshua, gave me all the unconditional love I could ever ask for. And last, but certainly not least, to my wife, Michelle, I have a debt of gratitude. It was with her love and support that I was able to meet this challenge and persevere.

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## LIST OF ABBREVIATIONS

AET	actual evapotranspiration
ARD/AMD	acid rock drainage or acid mine drainage
ASTM	American Society for Testing and Materials
AW	available water
AWHC	available water holding capacity
BREB	Bowen ratio energy balance
CB	capillary break
CEMA	Cumulative Environment Management Association
cm	centimetres
CO <sub>2</sub>	carbon dioxide gas
CS	Campbell Scientific
CS229	Campbell Scientific thermal conductivity sensors
CS616	Campbell Scientific TDR sensors
C <sub>u</sub>	coefficient of uniformity
d	diameter of capillary tube
D <sub>10</sub>	particle diameter at 10% passing the grain-size distribution
D <sub>60</sub>	particle diameter at 60% passing the grain-size distribution
D2	Syncrude 30 Dump D2 test cover
D3	Syncrude 30 Dump D3 test cover
DAS	data acquisition system
DP	deep percolation
ΔS	change in soil water storage
d <sub>s</sub>	depth of snow pack
E <sub>a</sub>	vapour pressure deficit
ET	evapotranspiration
F <sub>a</sub>	raw frequency reading in air
FC	field capacity
F <sub>s</sub>	raw frequency reading in soil
F <sub>w</sub>	raw frequency reading in water
g	grams
γ	psychrometric constant
g	acceleration due to gravity
GP	soil gas probe
GPD	soil gas probe on the deep coke cover
GPS	soil gas probe on the shallow coke cover
GSD	grain-size distribution
GW	groundwater
h	pressure head
H	hydraulic head
h <sub>c</sub>	height of capillary rise in a capillary tube
HDPE	high density polyethylene

List of Abbreviations (cont'd)	
I	interflow
IPM	instantaneous profile method
J	joules
K	hydraulic conductivity
$K_{fs}$	field saturated hydraulic conductivity
kg	kilograms
kPa	kilopascals
L	latent heat of vapourization
LCCS	Land Capability Classification System
LOS	lean oil sand
m	metres
$m^2$	square metres
$m^3$	cubic metres
MDH	MDH Engineered Solutions
MHz	megahertz
MJ	megajoules
MLSB	Mildred Lake Settling Basin
mmHg	millimetres of mercury
MPa	megapascals
MRL	moisture retaining layer
N	newtons
$n_i$	number of particles
$O_2$	oxygen gas
OKC	O'Kane Consultants Inc.
Pa	pascals
PET	potential evapotranspiration
PPT	precipitation
PRO XX	Diviner access tube soil water profile #XX
PVC	polyvinyl chloride
$\theta$	volumetric water content
$\theta_{FC}$	volumetric water content at field capacity
$\theta_r$	residual water content
$\theta_{rel}$	relative water content of a soil relative to its FC and WP
$\theta_s$	saturated water content
$\theta_{WP}$	volumetric water content at permanent wilting point
$\Theta$	normalized water content
q	unit infiltration rate
$Q_{net}$	net radiation
R	runoff
$r^2$	coefficient of determination
RH	relative humidity
$R_i$	mean particle radius
$\rho_s$	density of snow pack



List of Abbreviations (cont'd)	
S	degree of saturation
SBH	South Bison Hill
$S_{eff}$	effective saturation
SF	scaled frequency
SMR	soil moisture regime
SNR	soil nutrient regime
SP	stand pipe piezometer
SPD	stand pipe piezometer on the deep coke cover
SPS	stand pipe piezometer on the shallow coke cover
SWCC	soil water characteristic curve
SWE	snow water equivalent
SWSS	South West Sand Storage
T	surface tension
TC	thermal conductivity
TDR	time domain reflectometry
U of S	University of Saskatchewan
USCS	Unified Soil Classification System
VWC	volumetric water content
$\omega$	gravimetric water content
WDPT	water drop penetration test
WP	permanent wilting point
$\Psi$	suction

## CHAPTER 1 INTRODUCTION

Coke is a solid, carbonaceous residue that forms during the cracking of high-boiling point distillates and is one of the by-products of petroleum extraction from oil sands. Over the life of the oil sands projects in northern Alberta, Canada, it is estimated that 1 billion cubic metres of coke will be produced (Scott and Fedorak 2004). Although it is regarded by the province as a future potential energy source, there is currently no economically feasible use for the coke due to high transport costs and the lack of technology for clean and efficient combustion. As a result, oil sand operators face the challenge of providing long-term storage of this material in an environmentally feasible manner that allows for recovery and utilization of the coke for potential future use (Scott and Fedorak 2004). One option for the storage of coke is to place it in the reconstructed mining landscape as discrete deposits (landforms) that may be accessed in the future.

Extensive mining operations in the Fort McMurray area over the last four decades have drastically altered the landscape. Before returning control of the land back to the Crown, oil sands producers must demonstrate that the recreated landscape will provide an “equivalent land capability” (Cumulative Environment Management Association (CEMA) (2006)) in terms of water storage (soil moisture regime (SMR)) and nutrient supply (soil nutrient regime(SNR)) to sustain flora and fauna in the area. The coke will be part of that landscape and is the focus of a coordinated, multidisciplinary, research program to study the effects of coke on the environment. The SNR is outside the scope of research of this project and the focus in this study is on factors related to the SMR.

### **1.1 Site Background**

Syncrude Canada Ltd. (Syncrude), in partnership with Suncor Energy and Canadian Natural Resources Limited, constructed two instrumented watersheds over a coke deposit to identify the appropriate reclamation techniques for coke based landforms (Fenske et al. 2006). The watersheds were constructed at the Syncrude Mildred Lake Mine site near Fort McMurray,

Alberta. The overlying goal of research on this watershed is to define optimal soil cover designs that meet the closure requirements of a sustainable boreal forest ecosystem (Macyk et al. 2006).

## **1.2 Study Objectives and Scope**

The global objective of this thesis is to evaluate the performance of the instrumented soil covers focusing on the available water holding capacity (AWHC) required to sustain vegetation on each cover.

In order to meet the global objective, the following specific objectives were set:

- Install additional instrumentation to supplement the existing instrumented field site and verify the performance of the instrumentation.
- Characterize the covers including the measurement of soil parameters, interpretation of field monitoring data and laboratory testing.
- Develop a preliminary, one-dimensional water balance for the covers. This water balance will be used to evaluate the available water holding capacity (AWHC) of the covers and will assist in the interpretation of other mechanisms controlling cover performance (e.g. gas transport).

A preliminary water balance refers to the water balance that describes the early performance of the covers, in this case, after the first two years after construction.

Initial work on the construction of the instrumented watersheds began in the fall of 2003 and included placement of the soil covers and installation of field monitoring instruments. The instrumentation was installed by O’Kane Consultants Inc. (OKC) and included: a meteorological station; automated soil stations to monitor suction, water content and temperature; and, lysimeters to collect net percolation. The ‘as-built’ details of the watershed instrumentation listed above are outlined in Appendix A.

Additional instrumentation was installed on each watershed during this research program, beginning in the summer of 2005, to supplement the installations completed by OKC and to track spatial soil conditions (horizontally and vertically) across the watershed. The additional instrumentation included: access tubes for monitoring soil water content; temperature sensors; gas monitoring stations; and, standpipe piezometers to determine depth to the water table.

### **1.3 Thesis Layout**

The layout of this thesis is as follows. Chapter 2 provides a summary of appropriate literature to supply the necessary background for the thesis subject. Chapter 3 summarizes the installation of field monitoring equipment and laboratory work undertaken during the research project. Chapter 4 presents the data collected during the field and laboratory portions of the program. Chapter 5 provides discussion and interpretation of the data collected. Chapter 6 includes a summary of the research program and identifies areas for potential future research.

## CHAPTER 2 BACKGROUND INFORMATION

This chapter presents an overview of mine reclamation and reclamation covers as well as the role of instrumented watersheds in researching the performance of reclamation covers in the oil sands industry. The unique features of petroleum coke and its properties are also discussed.

### **2.1 Mine Reclamation and Reclamation Covers**

Until relatively recently, mine closure planning and land reclamation activities received little attention other than geotechnical or slope stability analysis (McKenna 2002). Over the last two to three decades, a more systematic discipline of landscape engineering has emerged which focuses on the interdisciplinary nature of mine reclamation. McKenna (2002) undertook a detailed site reconnaissance of 69 mine sites throughout North America and identified specific areas that require attention and improvement. Groundwater hydrology (hydrogeology), surface water hydrology and soil properties were among the topics most in need of detailed consideration.

Mine reclamation has become a complex problem and much research has been undertaken by mine operators to rehabilitate disturbed mine sites. There are only three operational activities that can be altered by oil sands operators to enhance the success of the reclamation activities: 1) general landform construction (e.g. topography); 2) placement of the cover soil (e.g. thickness, soil type, layering); and, 3) revegetation of the final landscape (e.g. seeding, tree planting) (Qualizza et al. 2004). Research into the performance of reclamation covers must, therefore, focus on the three activities listed above and must evaluate the impact that each process has on the other two.

#### **2.1.1 Purpose of Reclamation Covers**

The overall goal of land reclamation practice is to return the disturbed landscape to an “equivalent land capability” with the ability to sustain an ecosystem that can support vegetation and wildlife and re-establish wetlands. The Alberta government defines equivalent land

capability as *“the ability of the land to support various land uses after conservation and reclamation... similar to the ability that existed prior to an activity being conducted on the land, but that the individual land uses will not necessarily be identical”* (Alberta Sustainable Resource Development 2004).

The purpose of mine reclamation is to reduce environmental liability and return the land to its preceding owner, which in most cases is the Crown. This equivalent land capability philosophy was also incorporated by the Cumulative Environmental Management Association (CEMA) when developing the Land Capability Classification System for Forest Ecosystems manual (CEMA (2006)). The Land Capability Classification System (LCCS) is intended to assist with these land capability evaluations on both natural and reclaimed forest ecosystems in the Athabasca oil sands region.

Part of the requirements for all oil sands operators, prior to obtaining operating permits, is to prepare closure plans for the operations. These plans outline the process of taking the land from a state of pre-disturbance or natural state, through mining and extraction of the bitumen, to the final reconstructed landscape and the attainment of a reclaimed status suitable for reclamation certification. In order to achieve the goal of reclamation, every oil sands operator will be required to demonstrate that the land has achieved an equivalent capability to that which existed prior to the mining disturbance.

McKenna (2002) stated that, generally speaking, “most reclaimed landscapes are performing well.” However, during mining operations, most of the area occupied by each mine remains active and only about 10 percent of the total landscape reaches reclamation status prior to mine closure.

One of the major challenges facing the oil sands industry is managing the vast quantities of by-products created as a result of the extraction process. Therefore, research into the effects that these “waste” materials will have on the environment is necessary to ensure that proper soil cover designs are implemented for successful land reclamation.

### **2.1.2 Evolution and Evaluation of Reclamation Covers**

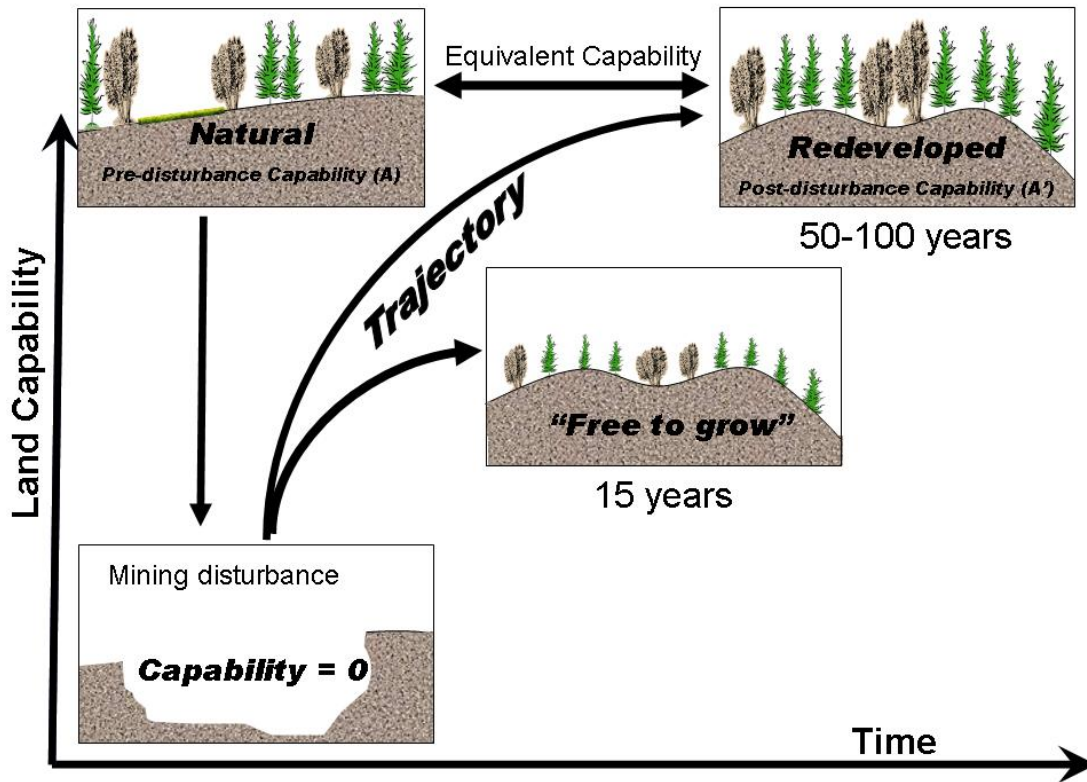
Much of the research conducted in the area of reclamation covers has dealt with the reclamation of mine waste which contains acid-generating sulphide-bearing minerals responsible

for the creation of acid rock or acid mine drainage (ARD or AMD) (O'Kane et al. 1998). In these cases, the main purpose of the engineered soil cover system is to prevent and/or limit the diffusion of oxygen and water into the underlying waste material, thus minimizing the creation of ARD. In contrast, the objective of the oil sands reclamation covers, as defined by the LCCS, is to optimize soil and landscape characteristics, through providing adequate soil moisture and soil nutrient regimes, and soil physical and chemical properties that are not potentially limiting to plant growth (CEMA (2006).

Essentially, the oil sands mining operations create a disturbance in the landscape that reduces the landscape to “capability = zero” (i.e. no ability to sustain a viable ecosystem) (Figure 2.1). After mining operations are complete, the boreal forest landscape of the Athabasca oil sands region must be reconstructed. The average time for a boreal forest to reach maturity is between 50 and 100 years, which is much longer than the 15 year time frame that an oil sands operator would like to attain a reclamation certificate. The forest industry adopted this 15 year time frame as the stage at which the trees in a boreal forest are deemed to be “free to grow” and have surmounted any site constraints (Qualizza et al. 2004).

Even though 15 years is a relatively short time frame in terms of a forest ecosystem, the research efforts are focused mainly on defining the trajectory of the forests towards an equivalent and sustainable ecosystem to that which existed prior to disturbance. Figure 2.1 illustrates a representation of the trajectory that the forest ecosystems will be required to undergo during reclamation.

The evolution of the landscape is not only seen in the progress of the forest growth, but is also evident in the evolution of hydrologic and soil material properties as the soil covers experience physical, chemical, and biological processes including freeze/thaw, leaching and root development. The instrumentation, monitoring and evolution of one such reclamation cover, the southwest 30 waste dump (30 Dump) is detailed by (Boese 2003; Barbour et al. 2004; Kelln et al. 2006).



**Figure 2.1 The “ideal” trajectory of the landscape from pre-disturbance capability A to post-disturbance capability A’ (reproduced from (Barbour 2005))**

In the Athabasca oil sands mining operations, the overlying peat and glacial deposits are stripped off to expose the underlying oil sand. This overburden material is segregated into a peat-mineral mix and glacial till, also known as secondary, and stored for future use in reclaiming the landscape. The peat-mineral mix topsoil is widely available and has been used in reclaiming the Alberta oil sands region for over 25 years (Moskal 1999). As with all open-pit mining, once the oil sand is removed, a large pit remains. Separated sand tailings and overburden material may be placed back into the pits and covered with peat-mineral mix and secondary in order to create an environment conducive to re-establishing vegetation.

## **2.2 Field Evaluation of Properties**

The LCCS (CEMA 2006) is a rating system to determine the suitability of the soil and landscape for reclamation practices in forested ecosystems in northern Alberta. The LCCS outlines a procedure to classify a landscape based on specific soil and environmental attributes that are vital to the sustainability of an ecosystem. The system includes ratings (in terms of



indices) for the SMR and the SNR highlighting potential limiting soil physical and chemical properties.

### **2.2.1 Available Water Holding Capacity**

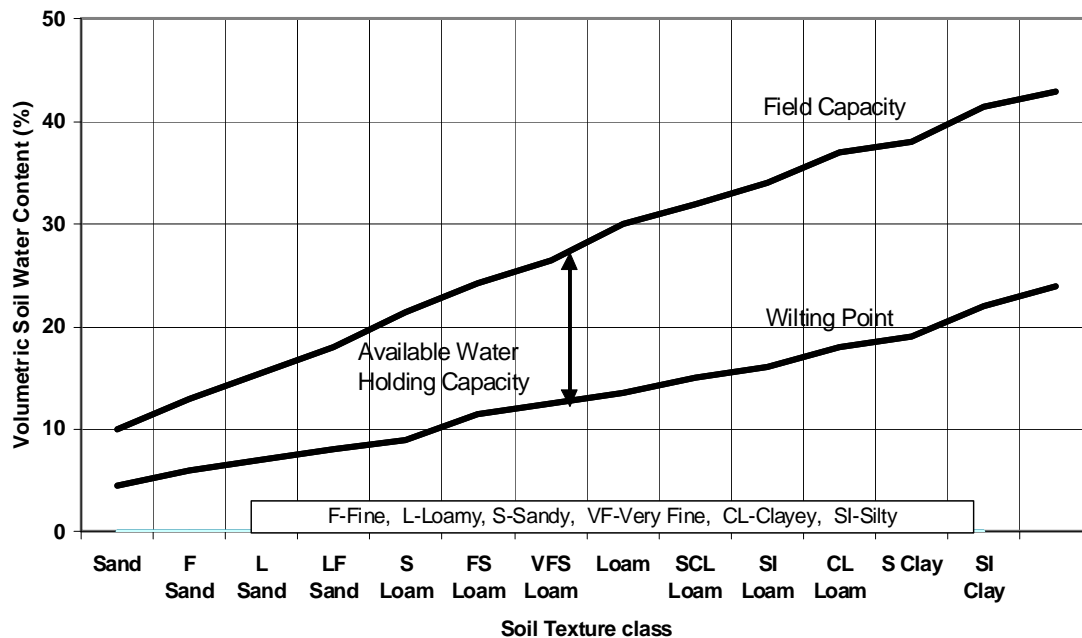
The AWHC is the primary consideration in determining the SMR index for landscapes where the depth of the water table is more than 100 cm below the ground surface. When the water table is within 100 cm of the soil surface, water supply for plant use is not an issue since the rooting system for most plants will be able to draw moisture directly from groundwater.

The AWHC is defined as the volume per unit area (i.e.  $\text{m}^3/\text{m}^2$ , conventionally reported in mm) of water stored within the upper meter of the soil profile and is calculated as follows:

$$\text{AWHC} = V_{\text{FC}} - V_{\text{WP}} \quad (1)$$

where, AWHC is the available water holding capacity (mm),  $V_{\text{FC}}$  is volume of water held within the soil cover at field capacity (FC) moisture conditions (mm), and  $V_{\text{WP}}$  is the volume of water held within the soil root zone at permanent wilting point (WP) (mm) moisture conditions. The volumes of water are calculated by multiplying the associated volumetric water contents (FC or WP) by the depth of soil associated with each water content. FC is the maximum volumetric water content of a soil under gravity drainage. This condition occurs after a fully saturated soil is allowed to drain freely under gravity with no evaporation losses. For a fine textured (e.g. clayey) soil, the FC is typically defined as the soil water content at a suction of 33 kPa. The WP is typically defined as the amount of water held in a soil at a suction of 1500 kPa, taken to be the point at which most plants wilt, i.e. are no longer able to survive (Richards 1931).

The concept of field capacity was first introduced by Israelson and West (1922). Veihmeyer and Hendrickson (1931) realized that the FC was not a constant for a particular soil, but introduced it as a means to improve water use efficiency for farmers. The concept of the wilting point for plants was first introduced by Briggs and Shantz (1912). Veihmeyer and Hendrickson (1928) determined that the WP was independent of environmental conditions. A generalized relationship between the FC and WP is shown in Figure 2.2.



**Figure 2.2 Available water holding capacity in volumetric water content vs soil texture showing estimates of FC and WP (reproduced from Ley et al. (1994))**

Coarse soils, such as sands and gravels, have very little capacity to store water for plant uptake. Fine soils, such as silts and clays, have the ability to not only retain a higher moisture content at FC, but also to store a larger volume of water (i.e. have a larger AWHC) than coarser soils (Figure 2.2). The AWHC is often calculated using laboratory estimates of the FC and WP. These laboratory estimated limits usually differ largely from limits measured in the field (Ratliff et al. 1983).

### 2.3 Instrumented Watersheds and Watershed Processes

The generally accepted method to study the hydrologic behavior of reconstructed landscapes in the oil sands industry is to construct instrumented watersheds. Instrumented watersheds are research sites constructed with full-scale cover systems instrumented to monitor surface water and groundwater hydrology, meteorological conditions and soil properties. There are many reasons why a watershed was chosen as the basis for reclamation research. The main reason is that the watershed is the primary “building block” of any natural landscape, that is, a watershed is defined by natural surface hydrology. Qualizza et al. (2004) provided a detailed rationale behind using the watershed approach in reclamation research.

To track the performance of a reclaimed landscape with respect to the SMR, it is necessary to understand and have sufficient information on the primary processes controlling the AWHC of the cover systems (CEMA 2006).

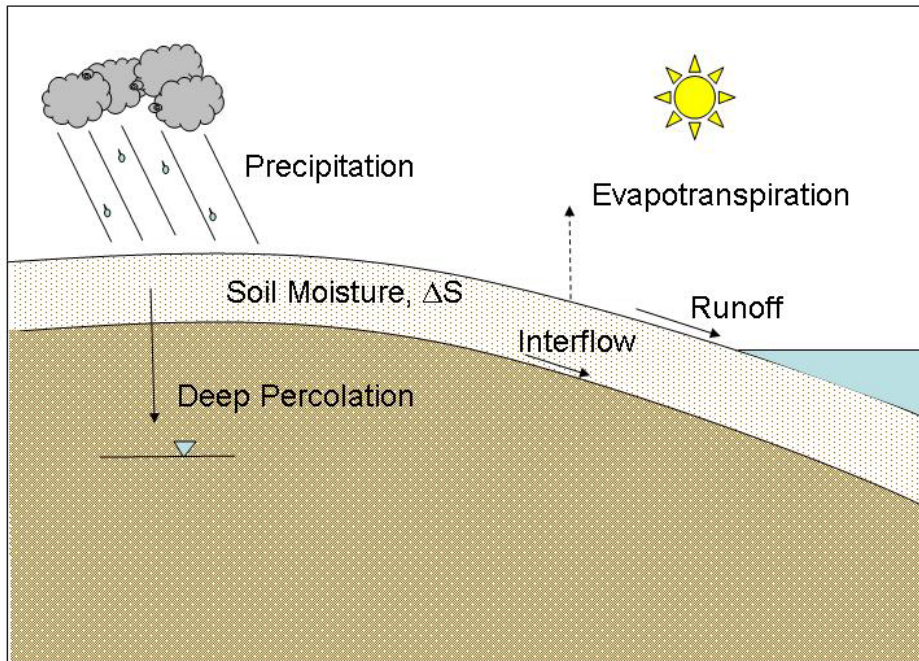
Hydrologic processes affecting the amount of water available to sustain the ecosystem within a watershed include precipitation, run-off, evapotranspiration, interflow, and deep percolation (Figure 2.3). Through the summation of these processes, the change in soil water storage can be calculated, thus completing the water balance. This water balance concept was first introduced in the literature by Thornthwaite (1940) when he first made the link between precipitation deficit and change in soil water storage. This concept was then refined and studied in more detail by Mather and Thornthwaite (1955). Figure 2.3 presents a schematic of the hydrologic cycle. The following expression defines the water balance:

$$\Delta S = PPT - R - AET - I - DP \quad (2)$$

where,  $\Delta S$  is the change in soil water storage (mm), PPT is precipitation (mm), AET is actual evapotranspiration (mm), R is surface runoff (mm), I is interflow (mm) and DP is deep percolation or groundwater recharge (into the underlying deposit).

One problem with calculating the change in soil storage is the accurate measurement of each component of the water balance. Other than the measurement of precipitation, which is relatively simple, measurement of the individual components of the water balance can be tedious, difficult and expensive. As a result, many studies have lacked sufficient data to accurately determine one or more components of the water balance. These components must then be determined as a residual (or remainder) (Flerchinger et al. 1998) and usually constitute only a small difference between two or more large-number components (eg. precipitation and evapotranspiration) resulting in large errors (Sophocleous 2004). Proper instrumentation and field measurement is vital to the determination of the over-all water balance for a given site.

The following sections summarize instrumentation for field monitoring of the above-mentioned parameters used in this study. A more detailed, general description of available instrumentation is provided by O’Kane (1995), Ayres (1998) and Boese (2003).



**Figure 2.3** Water balance components of a watershed system.

### 2.3.1 Soil Water

The change in soil water storage is calculated as the difference in the soil water content from one measurement to the next (eg. daily, weekly monthly, etc). Soil moisture is a measure of the total water present in a given soil and can be expressed in two ways; gravimetric water content (mass of water/mass of dry soil [g/g]), and volumetric water content (volume of water/total volume [ $\text{cm}^3/\text{cm}^3$ ]).

There are many *in situ* methods of measuring soil moisture including time domain reflectometry (TDR), neutron probes, and capacitance probes. In the laboratory, moisture content is generally measured gravimetrically.

#### Gravimetric Method

The measurement of soil water content is easily determined by using the American Society of Testing and Materials standard ASTM D2216-92 (ASTM 1992). The gravimetric water content is the ratio of the mass of water in a sample to the mass of dry soil and is determined by weighing the soil sample before and after oven-drying. Discrete soil samples must be collected for analysis of water content at specified locations, thus, this method is time-consuming and

labourious. Additionally, the volumetric water content of the sample can only be calculated from the gravimetric water content when the dry bulk density is known or can be determined. However, these measurements are relatively easy to obtain and can be used to calibrate monitoring equipment.

### Time Domain Reflectometry

Time domain reflectometry (TDR) was originally used as a method to test the integrity of telecommunication lines. Improvements in TDR technology allowed the dielectric constant of the material surrounding the cable to be measured based on the relationship between velocity of electromagnetic wave propagation and the dielectric constant of the medium. This technology was first applied to soil water measurements by Davis and Chudobiak (1975). The advantages of the TDR method are that it does not require sophisticated or expensive equipment, it offers immediate response, and it has the capability of providing continuous monitoring. The TDR method (and any technique that measures the dielectric constant of the soil to determine the soil water content) is contingent on the fact that the dielectric constant of water ( $\sim 82$ ) is significantly higher than that of the surrounding soil ( $\sim 4$ ) and air (1) (Spaans and Baker 1995). The dielectric constant (or relative permittivity) is a ratio of the permittivity (in Farads/m) of a material over the permittivity of free space (vacuum), therefore, dielectric constant is unitless.

There have been many devices developed using TDR technology, one of which is the Campbell Scientific CS616 water content reflectometer. The CS616 essentially consists of two stainless steel rods that act as a wave guide. The output of the CS616 is a square wave output read and recorded by a datalogger, which converts the output to a volumetric water content using calibration equations (Campbell Scientific Inc. 2006a).

The rods of the CS616 can be placed in the soil vertically to give an indication of the volumetric moisture content in the top 30cm or can be placed horizontally to measure water content in a horizontal plane, which can give an indication of vertical moisture fluxes and allow for the determination of water content profiles.

When measuring moisture contents in frozen soil, caution should be taken when interpreting the results. Frozen water has a lower dielectric constant than liquid water and, therefore, the soil

water content will be underestimated by a TDR technology probe (Spaans and Baker 1995; Boese 2003).

### Neutron Moisture Probe

The neutron moisture probe is a nuclear technology device that emits alpha particles by the decay of Americium-241. The probe consists of a high energy neutron source and a low energy neutron detector. When the fast neutrons collide with hydrogen nuclei present in the soil, they lose much of their energy. Most of the hydrogen present in soil is in the form of water. The number of slow neutrons detected gives an estimate of the hydrogen present, thus giving a measure of the soil water content (O'Kane 1995). The neutron probe requires the installation of permanent access tubes and user intervention to position the sensing probe within the access tubes.

Only a brief description of the neutron probes is provided here since they were not used in this study. For a more detailed description of the neutron probe and its uses refer to O'Kane (1995), Ayres (1998) and Boese (2003).

### Capacitance Moisture Probe

The capacitance probe (or fringe capacitance sensor) is similar to the TDR probe as it estimates the volumetric water content of soil by measuring changes in the dielectric constant of the soil. Similar to the neutron probe, the capacitance probe requires the installation of permanent access tubes and user intervention to position the probes within the access tubes. The probe consists of a sensing head with an oscillator circuit operating at a very high frequency (in excess of 100MHz). In one continuous swipe in the access tube, the probe is able to instantly read a complete profile up to 160 cm in depth. A datalogger reads and records the data as they are measured. An example of a capacitance probe is the Diviner 2000 manufactured by Sentek. The Diviner probe measures soil water content at regular intervals of 10 cm down through the soil profile to a depth of 160 cm. Readings are taken through the wall of the PVC access tubes installed directly in the soil (Sentek Environmental Technologies 1999).

The data collected by the Diviner probe are raw frequency readings taken by the sensor when exposed to the three-phase system of the air-water-soil interface within the access tubes. The

datalogger collects the raw frequency data and converts them to scaled frequencies (or normalized counts). This is accomplished by normalizing the raw frequency reading in soil,  $F_s$ , with the probe responses in air,  $F_a$ , and in water,  $F_w$ . The normalization equation to convert the probe readings to scaled frequencies,  $SF$ , is:

$$SF = \frac{(F_a - F_s)}{(F_a - F_w)} \quad (3)$$

where,  $F_a$  is the probe reading in the access tube when suspended in air,  $F_w$  is the probe reading in the access tube when in a water bath, and,  $F_s$  is the probe reading in the access tube in the soil to be measured.

The probe readings must be calibrated for each soil type. The calibration procedure involves adjusting the probe reading when measuring a soil with known moisture content. Fringe capacitance sensors can also be placed at specified intervals to measure moisture along the soil profile in a “string” or probe. The string can then be connected to an automated datalogging system in order to collect continuous readings as opposed to manual measurements. An example of this type of system is the EnviroSCAN system (Sentek Environmental Technologies 1997).

### 2.3.2 Precipitation

Determining the amount of precipitation that falls on a watershed involves the measurement of precipitation at various points within or near the watershed and extrapolating these measurements as an average depth of precipitation over the entire watershed. This precipitation will fall as either rain, snow or some combination depending on weather conditions. There are several characteristics of precipitation that are of interest including, total amount over a given period (daily, monthly, etc.), intensity, frequency and spatial distribution (Brooks et al. 1997).

There are several methods for the measurement of precipitation including both recording and non-recording gauges. Standard gauges (non-recording) are often used for economical reasons and are normally read once every 24 hours. The standard gauge funnels rainfall into a graduated internal cylinder 10 times smaller in diameter, thus magnifying the rain depth giving a more accurate measurement. Recording gauges allow for the continuous measurement of precipitation, but are more expensive (Brooks et al. 1997; Boese 2003).

The tipping bucket rain gauge is a recording-type gauge consisting of a large cylinder that funnels precipitation into two balanced buckets, of known volume, that tip back and forth as they are filled. A signal is sent to a datalogger, which records the number of tips and time of each tip. The advantage of this system is that it is automated and can give information on precipitation amount and intensity.

During the winter months, in northern regions, it is necessary to measure the seasonal snow cover in order to accurately measure the water equivalent. The most commonly employed approach is to measure this water volume by undertaking a snow survey. This involves traversing the area and measuring the snow water equivalent (SWE) of the snow pack as described by snow depth and density (Pomeroy and Gray 1995). SWE was evaluated as:

$$\text{SWE} = d_s \rho_s / \rho_w \quad (4)$$

where SWE is the snow water equivalent (mm),  $d_s$  is the average depth of the snow pack (cm), and,  $\rho_s$  and  $\rho_w$  are the average density of the snow pack and water ( $\text{kg/m}^3$ ).

Alternatively, there are various methods which attempt to measure snow fall in real time. Several types of snowfall adapters are available which can be placed on top of a tipping bucket rain gauge. A typical adapter consists of an antifreeze reservoir, an over-flow tube and a catch tube (Boese 2003). The snow gets captured in the catch tube dissolving in the antifreeze. The level of the antifreeze/water solution rises and spills over into the tipping bucket. Disadvantages of this system include: bridging of the snow over the tipping bucket; and, inaccurate measurements of snow that are recorded as precipitation at the rain gauge but redistributed to d by as much as 1.3 m over the period of the study from 2005-2006

### **2.3.3 Runoff and Interflow**

Runoff, or overland flow, is water that flows over the soil surface out of the watershed catchment or study area. Runoff and/or ponding can occur when the rainfall intensity exceeds the infiltration capacity of the soil or when the soil has become saturated and can no longer infiltrate the soil surface (Brooks et al. 1997; Ghosh and Desai 2006).

Interflow is the portion of the water that infiltrates the soil surface, but then flows laterally or horizontally along a textural contrast or compacted layer within the soil. It is considered the major pathway for flow in most well-drained forested watersheds (Brooks et al. 1997).



Both runoff and interflow are complex hydrological processes that are difficult to accurately quantify; field measurement of runoff and interflow were reviewed thoroughly by (Ayres 1998; Boese 2003).

#### **2.3.4 Evapotranspiration**

Evapotranspiration (ET) is composed of two separate processes; it is the cumulative sum of evaporation and transpiration (Granger 1989). However, both processes have the same result - the loss of moisture from the soil and its return as vapour to the atmosphere.

Evaporation from an open surface water body or from an initially saturated soil surface is dependent on the energy supply and the vapour pressure gradient. As evaporation occurs, water moves up from below the surface in soil pores to replace the lost water. As evaporation continues, the soil becomes dryer and a gradient in the total water potential is created, i.e. suction (discussed further in Section 2.3.6).

Transpiration is a biological adaptation of the evaporation process. Plants draw soil water into their systems through vast rooting networks that is released to the atmosphere through stomatal regulation (Strahler and Strahler 1983; Brooks et al. 1997). Transpiration is a more efficient process because of the large evaporating surfaces created by the foliage of the plants that is directly exposed to turbulent mixing of air above the soil boundary layer.

Potential evapotranspiration (PET) is a concept that was first developed by Penman (1948). It is a measure of the evaporation from a free water surface and is limited only by available energy. He combined a simplified energy budget and included turbulent air flow characteristics to estimate evaporation. The modified Penman method is still perhaps the most commonly used method for simply estimating PET. One of two methods is usually employed to measure PET, one is the direct method and the other is a micrometeorological method.

The simplest and least expensive method to determine PET is to use an evaporation pan. The method requires regular operator intervention to monitor the water levels in the pan and to account for water added through precipitation and manual filling.

Micrometeorological methods employed to measure energy and vapour fluxes within atmospheric boundary layers include the Bowen Ratio Energy Balance (BREB) and the Eddy Covariance System. The BREB method combines the measurement of temperature and vapour

pressure to calculate the ratio between sensible heat flux and latent heat flux (Bowen 1926). The Eddy Covariance system utilizes a sonic anemometer, a hygrometer and thermocouples to measure and calculate vertical turbulent fluxes. Generally speaking, the Eddy Covariance method has superceded the BREB method as the industry standard.

### 2.3.5 Estimating AET

Actual evapotranspiration (AET) can be related to PET as a function of the ratio of the available water (AW) and the AWHC. AW is the actual water that is available for plants (i.e. AW = actual water content of the soil - WP). The AET/PET ratio can be expressed as:

$$\frac{AET}{PET} = f\left(\frac{AW}{AWHC}\right) \quad (5)$$

During wet periods, such as heavy rainfall events or after the spring freshet, when the soil moisture conditions exceed field capacity, the AET would be anticipated to be at or near PET. Conversely, as air temperatures rise, evaporation increases and plant growth gives rise to evapotranspiration, the ratio of AET/PET decreases simply due to limiting water contents in the soil (Brooks et al. 1997).

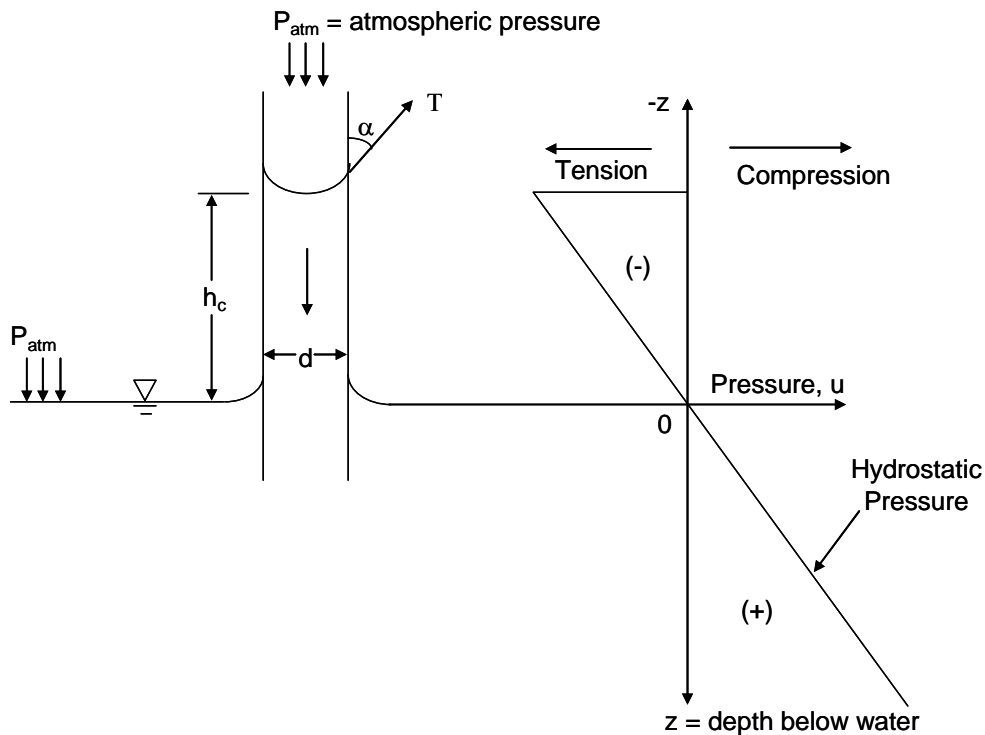
### 2.3.6 Soil Matric Suction

Matric suction, or capillary pressure, is a result of surface tension, a phenomenon that arises at the interface between different materials (Holtz and Kovacs 1981), created from the combined effects of molecular adhesion (i.e. liquid to solid interaction) and cohesion (i.e. liquid to liquid interaction) (Bear 1975). The concept of matric suction can be demonstrated using the capillary model. The height of rise of water in a capillary tube must be equivalent to the capillary pressure (expressed as a height of water) created by the capillary forces described above (Mandziak 1991). However, the pores in soil are irregularly shaped pore spaces, not long glass capillary tubes. The soil-water-air system is a much more complex system and the shape of water surfaces will vary from pore space to pore space. Using basic principles of statics and geometry, the equation for the forces acting in the water column was expressed by Holtz and Kovacs (1981) as:

$$h_c = \frac{-4T \cos(\alpha)}{\rho g d} \quad (6)$$

where  $h_c$  is the height of capillary rise (mm),  $T$  is the surface tension (newtons (N)/m (force per unit length)),  $\alpha$  is the contact angle ( $^\circ$ ),  $\rho$  is the density of water ( $\text{g/cm}^3$ ),  $g$  is the acceleration due to gravity in ( $\text{m/s}^2$ ), and,  $d$  is the diameter of the capillary tube in (mm).

Equation 6 demonstrates that the height of the capillary rise is inversely proportional to the diameter of the capillary tube (Figure 2.4); as the diameter of the tube decreases, the height of the capillary rise increases. The height of the capillary rise is analogous to the matric suction of a soil. There is also an inverse relationship between pore size and the ability of the pore to maintain saturation before draining. Above the free surface of the water table, pore water pressure is negative or in tension (suction) and below the water table, pore water pressure is positive (hydrostatic) (Figure 2.4). The level of soil suction within the soil can be measured using a number of direct or indirect methods.



**Figure 2.4** Capillary rise in a capillary tube (reproduced from Holtz and Kovacs (1981)).

### Thermal Conductivity Sensor

An indirect method of determining soil suction is by using a thermal conductivity sensor. The thermal conductivity of a porous media changes with changes in the moisture content. The thermal conductivity sensor measures the thermal properties (conductivity and specific heat) of a porous medium, such as a ceramic, by heating the material and measuring dissipation of the heat as a function of time.

When the porous sensor is placed in soil and a good contact is created between the surrounding soil and the sensor, moisture will pass from the soil into the sensor until the suction of the soil is reached. Once calibrated, the thermal conductivity of the ceramic can be correlated to moisture content and suction can be determined.

An example of a matric suction sensor is the Campbell Scientific 229 Heat Dissipation Matric Water Potential Sensor. It consists of a cylindrically-shaped porous ceramic body, a heating element, and a thermocouple. The ceramic cylinder has a diameter of 1.5 cm and a length of 3.2 cm (Campbell Scientific Inc. 2006b). The sensor has a measurement range of -10 kPa to -2500 kPa. Calibration of each individual sensor is required due to variability of heat transfer properties from one sensor to another.

#### **2.3.7 Soil-Water Characteristic Curve**

The soil-water characteristic curve (SWCC) is the basic soil relationship between moisture content and matric suction and creates a foundational conceptual framework for the study of unsaturated soils. An extensive amount of research has been conducted on SWCCs and the term was first coined by Childs (1940). The relationship is usually expressed in terms of gravimetric water content,  $\omega$ , volumetric water content,  $\theta$ , or degree of saturation,  $S$ , and suction,  $\Psi$ .

Figure 2.5 illustrates typical SWCCs for desorption (draining) and adsorption (wetting). The air entry value, or bubbling pressure, (i.e.  $(u_a - u_w)_b$ , where  $u_a$  is the pore air-pressure and  $u_w$  is the pore-water pressure) is the value of matric potential at which the largest pores in the soil drain and air is allowed to enter the soil matrix. The residual water content is the water content at which drainage essentially stops and vapour migration is required to remove additional water from the soil pores (Fredlund and Xing 1994; Barbour 1998).

Volumetric water content,  $\theta$ , can be expressed in terms of a normalized water content,  $\Theta$ , or effective saturation,  $S_{eff}$ , with the following relationship:

$$\Theta = S_{eff} = \frac{\theta - \theta_r}{\theta_s - \theta_r} \quad (7)$$

where  $\theta_r$  and  $\theta_s$  correspond to the residual and saturated water contents of a soil, respectively (van Genuchten 1980).

Several equations have been proposed in literature for estimating the SWCC. One of the most common is van Genuchten's equation (van Genuchten 1980):

$$\theta = \left[ \frac{1}{1 + (\alpha h)^n} \right]^m \quad (8)$$

where  $\alpha$ ,  $n$  and  $m$  are equation fitting parameters and  $h$  is the pressure head. Essentially, these parameters have no physical meaning and are mostly used as factors for curve fitting; however, it has been theorized that there is a physical correlation in van Genuchten's equation for  $n$  and  $\alpha$  (Guber et al. 2004) –  $n$  being related to the fines content of the soil and  $\alpha$  being related to the content of the coarser fraction of the soil (Porebska et al. 2006).

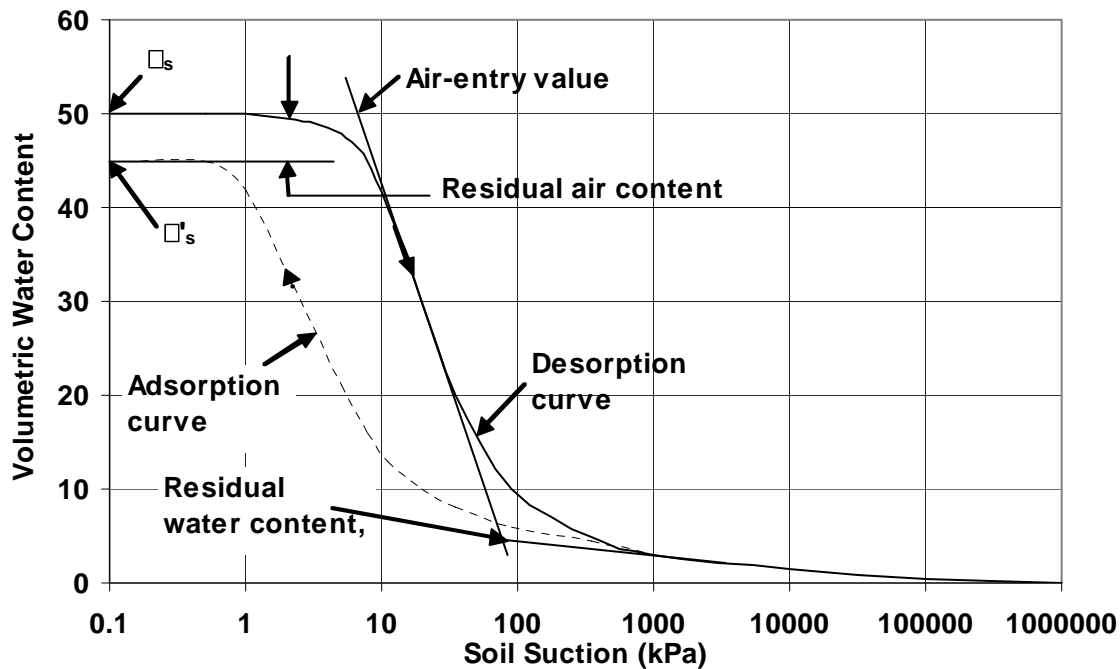


Figure 2.5 Typical desorption and adsorption curves for a silty soil (reproduced from Fredlund and Xing (1994)).

### Estimating SWCC Using Grain-Size Distribution

The grain-size distribution (GSD) is a routinely measured soil property and has an affect on the moisture retention behaviour of a soil. Arya and Paris (1981) presented a physico-empirical approach to determine the SWCC using the GSD. The approach was prompted by the observation that the SWCC for many soils was similar in shape to the corresponding GSD for the soil. From the previously discussed equation of capillarity (Equation 6) the soil water pressure can be determined from the following:

$$\psi_i = \frac{2\gamma \cos(\theta)}{\rho g r_i} \quad (9)$$

where  $\psi_i$  is the soil water pressure (m),  $\gamma$  is the surface tension of water (N/m),  $\theta$  is the soil-water contact angle ( $^\circ$ ),  $\rho$  is the density of water ( $\text{kg/m}^3$ ),  $g$  is the acceleration due to gravity in ( $\text{m/s}^2$ ), and,  $r_i$  is the pore radius in (m). The model divides the GSD into  $n$  grain-size ranges and assumes spherical soil particles and cylindrical pores such that:

$$r_i = R_i \left[ \frac{4en_i^{1-\alpha}}{6} \right]^{1/2} \quad (10)$$

where  $R_i$  is the mean particle radius,  $n_i$  is the number of particles in the given grain-size range, and  $\alpha$  is a shape factor to correct for the reality that the actual soil particles are non-spherical (Arya and Paris 1981).

Many others since have used the GSD to predict the SWCC (Tyler and Wheatcraft 1989; Fredlund et al. 1997; Arya et al. 1999; Fredlund et al. 2002).

#### **2.3.8 Hydraulic Conductivity Functions (K-Functions)**

In unsaturated soils, the hydraulic conductivity,  $K$ , is not a constant and, like the SWCC, is a function of the soil matric potential. As a soil desaturates or drains, the hydraulic conductivity can vary by a range of 10 orders of magnitude (Fredlund et al. 1994).

Empirical equations to predict hydraulic conductivity as a function of moisture content,  $k(\theta)$ , were introduced by Averjanov (1950), Childs and Collis-George (1950), Davidson et al. (1969), Campbell (1973). Empirical equations to predict hydraulic conductivity as a function of matric potential,  $k(\psi)$  were introduced by Richards (1931), Wind (1955), Gardner (1958), Brooks and Corey (1964) and Rijtema (1965).

Fredlund et al. (1994) put forward a method to predict the hydraulic conductivity function using the SWCC. This function covers the entire range of suctions of the SWCC (from 0 to  $1 \times 10^6$  kPa suction) and is based on the assumption that the amount of water in a soil determines the ease with which water will flow.

The instantaneous profile method is a direct method, using actual field data, for determining the hydraulic conductivity function (Watson 1966; Krisdani et al. 2009) and is generally considered the best and most widely used field method available (Nagpal and de Vries 1976). The method requires the simultaneous measurement of soil matric suction and water content of a wetted soil profile as it drains over time after the water supply has been shut off. The transient data are then used to calculate the hydraulic conductivity along the soil profile using the following equation:

$$K(\theta) = \int_0^L \frac{\partial \theta}{\partial t} dz \div (dH / dz) \quad (11)$$

where  $L$  is the total depth of the soil profile being measured,  $\delta\theta/\delta t \, dz$  is the change in soil water content over time for each incremental depth, and  $dH/dz$  is the change in hydraulic head over each incremental depth along the soil profile.

### **2.3.9 Capillary Barrier or Capillary Break**

One of the objectives of soil covers used in mine reclamation is to minimize the amount of water percolating through the soil covers into the underlying waste material in order to maximize storage in the cover and minimize the volume of effluent generated.

One method of diverting or storing infiltration water is by incorporating what is known as a capillary break (CB) within the cover. A CB is created by placing a finer-textured material over a coarser-textured material. The contrast in the moisture storage properties produced by this textural contrast essentially creates the CB (Ross 1990).

Under a constant infiltration rate,  $q$ , the suction,  $\psi$ , in the coarser soil will be very low since the hydraulic conductivity of a coarser soil decreases rapidly with any increase in suction. The finer textured soil lying above the coarser layer will remain near saturation at these low values of suction and in many cases will have a water content much higher than FC even after drainage ceases since the maximum suction within the coarser material is limited to values developed at the residual water content.

The prime objective of CB covers to control acid rock drainage is to control the availability of oxygen to the underlying sulphide rich, acid generating rock wastes or tailings (Rasmuson and Erikson 1986; Bussiere et al. 2003). The presence of the CB results in the upper finer soil layer being referred to as the moisture retaining layer (MRL). If the MRL is at a high degree of saturation, the ingress of oxygen into the waste through gas diffusion is reduced by 4 or 5 orders of magnitude relative to that for a dry soil. The higher water content and corresponding degree of saturation leads to a reduction in the gas permeability and gas diffusion coefficient, which in turn produces low gas fluxes through the cover (Yanful 1993). There have recently been developments in the use of capillary barriers to prevent flow through soils to maintain drainage for stability purposes (Tami et al. 2004). The simple nature of the capillary barrier makes it cost effective and ideal for many applications and due to relatively recent breakthroughs with this technology there are still likely many applications yet to be discovered.

## **2.4 Petroleum Coke**

### **2.4.1 Description of Petroleum Coke**

As previously mentioned in Chapter 1, petroleum coke is a byproduct of the oil sands industry. It is produced through the carbonization of high-boiling point hydrocarbon fractions obtained when processing the heavy residue found in the oil sands (McNaught and Wilkinson 1998). Coke is essentially a carbon-rich compound that resists thermal cracking.

Depending on the process used to create the coke, it can exist as a fine sand-like powder, as with fluid coking, or as irregular chunks, as with delayed coking (Scott and Fedorak 2004). Syncrude produces fluid coke, which is composed of spherical grains with an onion-like layered structure. The texture of the coke is similar to that of a fine to medium sand.



### **2.4.2 Physical Properties of Coke**

A detailed review of coking processes for oil sands coke was conducted by Scott and Fedorak (2004). The review included discussion of the physical properties of the various types of coke produced by oil sands companies. They describe Syncrude coke as uniform, medium to fine sand size. The specific gravity of Syncrude coke ranges from 1.50 to 1.65, typically the specific gravity of sand is 2.65. The laboratory and field measured hydraulic conductivity ranges from  $1 \times 10^{-6}$  to  $1 \times 10^{-5}$  m/s.

### **2.4.3 Hydrophobicity of Coke**

The hydrophobic effect is the tendency for water, which is a polar molecule, to repel non-polar molecules, such as coal or petroleum coke. Coke exhibits hydrophobic or water repelling properties due to its high carbon content. Soils that have hydrophobic properties will tend to resist the infiltration of water until sufficient positive water pressures (up to several cm) are built up to overcome the water entry pressure (Brandt 1969; Bauters et al. 2000; Nieber et al. 2000). Studies have also shown that water flow through hydrophobic soils is often dominated by preferential flow (Bauters et al. 1998; Ritsema et al. 1998; Nissen et al. 1999; Nieber et al. 2000). Preferential flow creates spatial variability in soil moisture which can adversely affect plant growth. Preferential flow also produces high rates of moisture flow since it limits the ability of the soil to store water by capillarity.

The shape of the wetting front that moves through hydrophobic soils is different than that for hydrophilic soils. The wetting front in a hydrophilic soil moves as a stable flat horizontal front. The wetting front in a hydrophobic soil is unstable and forms a “fingered” front. Water flow through these fingers moves faster than the horizontal wetting front (Bauters et al. 2000).

A soil that is initially hydrophobic can also become hydrophilic over time due to the build up of surface coverings of more hydrophilic material (bacteria, sediment) and/or the slow wetting of the surface layer over time.

## **2.5 Water Retention of Previous Reclaimed Sites**

Oil sands operators have been conducting experiments on reconstructed watersheds to monitor the performance of the experimental cover systems over time. The 30 Dump is one research site that was constructed on a saline-sodic shale overburden dump. The site consists of

three experimental covers (D1, D2, and D3) with varying thicknesses (50 cm, 35 cm, and 100 cm). Each cover was constructed with 15 cm to 20 cm of peat-mineral mix on top of a layer of secondary (Boese 2003). A second site was located at Syncrude's South West Sand Storage (SWSS) area. This cover was constructed of 20 cm to 40 cm of secondary overlying tailings sand (Parasuraman et al. 2007). A third site was located at Syncrude's South Bison Hill (SBH) area and was constructed of 20 cm of peat mineral-mix overlying 80 cm of secondary (Parasuraman et al. 2007). Each research site was vegetated and heavily instrumented to evaluate the meteorological and soil characteristics of the reclamation covers.

The hydrological performance of these covers was evaluated using a comparative probabilistic assessment approach by Keshta et al (2010). Results of this assessment indicated that the thickest, D3 cover (100 cm), was able to release more water under high demand. This suggests that it performed better in terms of available water storage. The results were compared to natural sites that were also instrumented and monitored for reference. The assessment showed that the natural systems performed better than the reconstructed landscapes, especially under extreme conditions. Further, it was noted that the introduction of a mature natural vegetation canopy to the SBH cover had positive results in terms of available water storage.

## CHAPTER 3 FIELD AND LABORATORY PROGRAM

To evaluate the AWHC of the test covers, the water balance of each cover was calculated using several measured water balance components. This chapter describes the field and laboratory programs undertaken at the Syncrude coke watershed during this research project (2004-2006).

The field portion consisted of an instrumentation program and an *in situ* test program. Data collected during the instrumentation program included soil matric suction, soil temperature and volumetric soil moisture content through the soil cover profile, as well as site meteorological conditions. The *in situ* and laboratory testing was undertaken to assist with the characterization of the soils on the test plots.

### 3.1 Description of Test Covers

Syncrude's oil sands operation is located in northern Alberta within the Athabasca Oil Sands region (Figure 3.1). The research site is located within Syncrude's Mildred Lake Settling Basin (MLSB) (Figure 3.2). Hydraulically placed coke was stored in the southwest corner of the MLSB and is known as the coke beach and can be clearly seen in Figure 3.2. Two triangular-shaped soil test covers were constructed on the coke beach (Figure 3.3) in the fall/winter of 2003 using local secondary (till) and peat-mineral mix recovered and salvaged during oil-sands mining operations. The dimensions of each test cover are approximately 200 m by 150 m. The two prototype covers were implemented as follows:

- Deep Cover: A 100 cm (nominal thickness) cover comprised of 15 cm of peat-mineral mix over 85 cm of secondary; and,
- Shallow Cover: A 35 cm (nominal thickness) cover comprised of 15 cm of peat-mineral mix over 20 cm of secondary.



**Figure 3.1 – Location of the Athabasca Oil Sands Area in northern Alberta, Canada.**  
(Alberta Geological Survey 2010)

### **3.2 Field Instrumentation**

An automated water balance monitoring system was installed starting in 2003 at the MLSB coke beach site. The system consisted of:

- One meteorological station and two (one on each cover) net percolation monitoring systems (tank lysimeters) installed in the fall of 2003 prior to cover material placement;
- Automated soil stations to monitor in situ moisture and temperature conditions in the cover/coke material profile installed on each cover in August 2004.



**Figure 3.2 - Satellite image of the Syncrude MLSB area (image © 2010 Google Map data).**



**Figure 3.3 - Satellite image of the Syncrude coke study area (image © 2010 Google Map data).**

Additional details about these systems are included in the following subsections of this chapter.

Initial work on the construction of the instrumented watersheds began in the fall of 2003 and included placement of the soil covers and installation of field monitoring instruments. The instrumentation program was designed and installed by O’Kane Consultants Inc. (OKC) and included: a meteorological station; automated soil stations to monitor suction, water content and temperature; and, lysimeters to collect net percolation. The ‘as-built’ details of the watershed instrumentation listed above are outlined in Appendix A.

Additional instrumentation was installed by the author on each watershed during the summer of 2005, to supplement the installations completed by OKC and to track spatial soil conditions (horizontally and vertically) across the watershed. The additional instrumentation was installed in an east-west transect on each cover and included: access tubes for monitoring soil water content; temperature sensors; gas sampling points; and, standpipe piezometers to determine depth to the water table. A summary of the instruments installed on the covers is presented in Table 3.1. All instrumentation installed after the covers were placed was installed using manual methods (i.e. hand tools) to protect the covers and instruments from damage. Heavy equipment, such as drill rigs and excavators, was not permitted on the covers.

**Table 3.1 - Summary of instrumentation installed on the deep and shallow covers**

<b>Cover</b>	<b>Instrumentation by OKC (2003-2004)</b>	<b>Instrumentation as part of this study (Summer 2005)</b>
Deep Cover (100 cm)	<ul style="list-style-type: none"> <li>- Automated Soil Monitoring Station (consisting of 8 water content sensors and 8 suction/ temperature sensors)</li> <li>- 1 Tank Lysimeter</li> <li>- Data Acquisition System (DAS)</li> </ul>	<ul style="list-style-type: none"> <li>- 2 soil gas and temperature monitoring stations</li> <li>- 2 standpipe piezometers</li> <li>- 3 manual water content access tubes</li> </ul>
Shallow Cover (35 cm)	<ul style="list-style-type: none"> <li>- Meteorological Station</li> <li>- Automated Soil Monitoring Station (consisting of 8 water content sensors and 8 suction/ temperature sensors)</li> <li>- 1 Tank Lysimeter</li> <li>- Data Acquisition System (DAS)</li> </ul>	<ul style="list-style-type: none"> <li>- 2 soil gas and temperature monitoring stations</li> <li>- 3 standpipe piezometers</li> <li>- 3 manual water content access tubes</li> </ul>

The field program included a set of instruments that required regular manual monitoring and recording of field data. Manual field measurements included soil temperature, soil gas

concentrations, soil moisture profiles, and groundwater levels. These instruments consisted of thermocouple strings to measure soil temperature, gas monitoring stations to measure soil gas concentrations, a Diviner 2000 system to measure soil volumetric moisture content, and standpipe piezometers to measure groundwater levels. The thermocouple strings and the gas probes were installed in a single hand-augured borehole at each profile location situated near the east and west ends of the covers. The layout and locations of the instruments is shown on Figure 3.4. Construction/completion details of the borehole instrumentation are included in borehole logs in Appendix B.

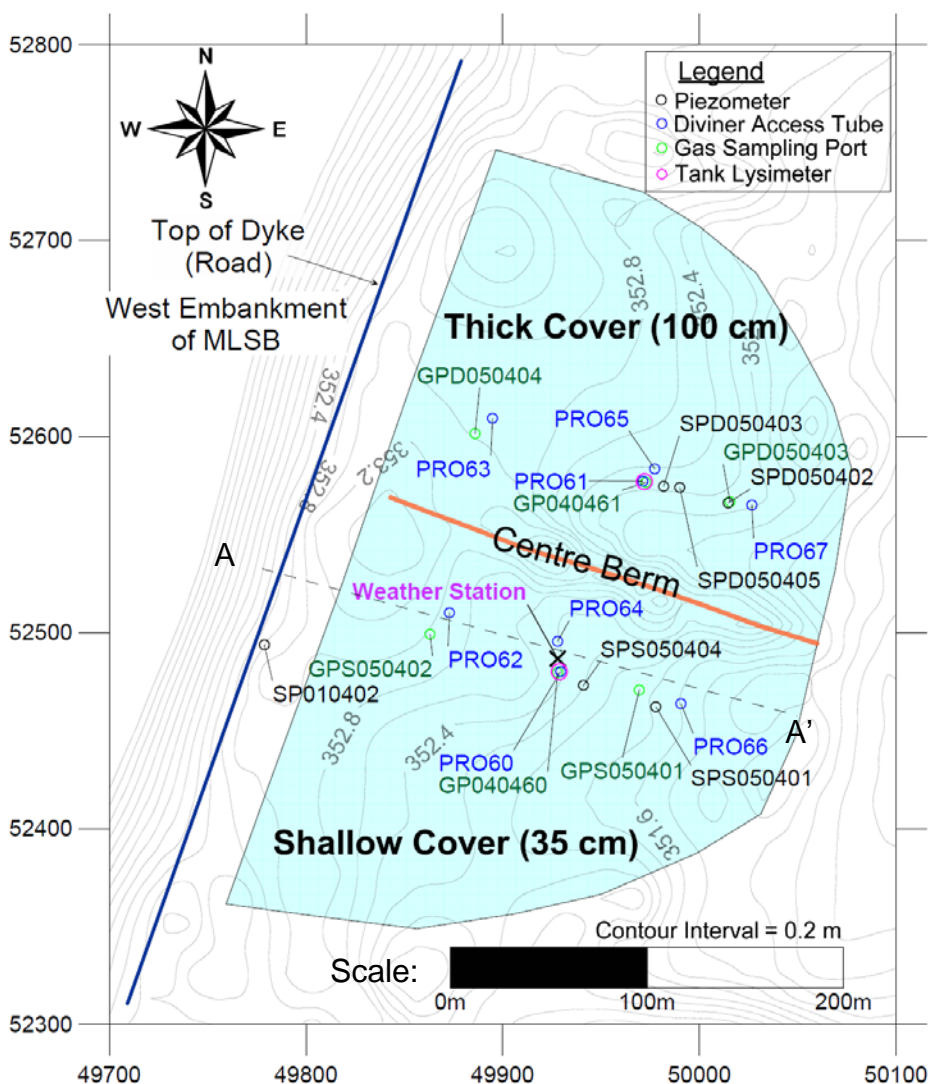


Figure 3.4 – Layout of instrumentation on the Syncrude coke covers.

### 3.2.1 Meteorological Station

The meteorological (weather) station installed on the coke beach is used to monitor air temperature, relative humidity (RH), wind speed and direction, net radiation, and precipitation. The weather station was located near the centre of the shallow cover and is shown on Figure 3.4.

Air temperature and RH were measured with a Campbell Scientific Model HMP45CF probe. The HMP45CF contains a Betatherm 0.3K1A1A thermistor and a Vaisala HUMICAP® 180 capacitive RH sensor. To minimize the effects of solar radiation and wind and to provide sufficient ventilation, a multi-plate radiation shield was used to protect the air temperature/RH probe. An R.M. Young Model 05103 anemometer was used to measure wind speed and direction. Net radiation (sum of incoming and outgoing radiation - both short and long-wave) was measured with an NR-Lite Net Radiometer, which is a high-output thermopile sensor (which converts thermal energy to electrical energy) mounted approximately 2.5 m above the ground surface. All of the above sensors were attached to the meteorological station mast/tripod. Precipitation was recorded with a model TE525 tipping bucket rain gauge.

### 3.2.2 Automated Soil Monitoring Stations

Automated soil monitoring stations were installed adjacent to the tank lysimeters on both the shallow and deep covers. The soil monitoring systems were installed during the summer/fall of 2004 and the data acquisition system (DAS) for the stations was commissioned and began collecting data in March 2005.

Sensors were installed to automatically measure *in situ* soil moisture, suction, and temperature. Campbell Scientific (CS) CS229 thermal conductivity (TC) sensors were used to monitor *in situ* matric suction and temperature. Time domain reflectometry (TDR) CS616 sensors were installed to measure volumetric water content within the cover and underlying coke.

These *in situ* monitoring instruments were installed in a single instrumentation nest at the monitoring site, approximately 10.0 m from the centre of the meteorological station mast/tripod on the shallow cover and adjacent to the tank lysimeter on the deep cover. Sensors were located directly above and below the peat-mineral mix-secondary interface and the secondary-coke



interface within the soil profile in order to give more detailed information about the soil conditions (i.e. moisture, suction, temperature) near each soil type interface.

The in situ monitoring instruments on the shallow cover were installed at the following depths: 5 cm, 10 cm, 20 cm, 25 cm, 30 cm, 40 cm, 90 cm, and 180 cm. The peat-secondary interface occurred at a depth of 15 cm at the location of the instrument nest and the secondary-coke interface occurred at a depth of 35 cm.

The in situ monitoring instruments on the deep cover were installed at the following depths: 5 cm, 20 cm, 30 cm, 45 cm, 70 cm, 90 cm, 100 cm, and 180 cm. The peat-secondary interface at the location of the instrument nest on the shallow cover occurred at a depth of 25 cm and the secondary-coke interface occurred at a depth of 95 cm.

### **3.2.3 Data Acquisition System (DAS)**

The meteorological station was connected to an automated DAS located on the meteorological station mast/tripod. The DAS consists of a CR10X datalogger, powered by a rechargeable battery/solar panel system. The datalogger and rechargeable battery were housed in an environmentally sealed fibreglass enclosure, supplied by Campbell Scientific Canada. The lead-wire for the tipping bucket rain gauge was buried in the near surface cover material to protect against wildlife and environmental damage.

Each climatic parameter was measured every 60 seconds, then averaged hourly and daily. Daily maximum and minimum values were recorded in memory by the DAS for subsequent data collection. Precipitation data was recorded by the tipping bucket rain gauge as precipitation occurred.

The soil stations on the shallow and deep covers were also connected to an automated DAS. The DAS consisted of a Campbell Scientific CR10X datalogger, powered by a rechargeable battery/solar panel system, and two multiplexers, one each for the CS229 (thermal conductivity) sensors and CS616 (time domain reflectometry) sensors. All the multiplexers, dataloggers and rechargeable batteries were housed in an environmentally sealed fiberglass enclosure. Each instrument at the soil station recorded data every 6 hours (4 times daily: 6 a.m., noon, 6 p.m., and midnight) in order to capture daily trends/cycles. The measurements were stored in the memory of the DAS for subsequent data collection.

Data were downloaded from the DAS using a laptop computer. More detailed information regarding the installation of the meteorological station and the soil stations can be found in Appendix A.

#### **3.2.4 Tank Lysimeters**

Two tank lysimeters were installed to collect and monitor the quantity and quality of net percolation through the covers, as illustrated in Figure 3.5. The design of these monitoring systems was based on the results of numerical analysis, as outlined in Appendix A (O'Kane Consultants Inc. 2004). Each system is comprised of the following components:

- Net percolation collection tank;
- In situ moisture probe (Diviner 2000);
- Gas monitoring/sampling ports; and
- Piezometer for water level measurement, sample collection, and water removal.

A cross section of the tank lysimeters is shown in Figure 3.6. Details of the lysimeter construction can be found in Appendix A (O'Kane Consultants Inc. 2004).

The tank lysimeters were installed near the center of both the shallow and deep covers. The lysimeters were regularly monitored for depth to water and pumped, keeping track of the volume of water removed, in an attempt to track infiltration rates through the cover systems into the underlying coke. Removal of water from the lysimeters was accomplished using a peristaltic pump.

#### **3.2.5 Soil Temperature**

Both automated and manual methods were implemented for the measurement of soil temperature profiles across the study site. Automated soil temperature profiles were measured using the CS229 sensors at the soil instrumentation stations. The installation of these sensors is described in Section 3.2.2. The thermal conductivity sensors were located near the centre of each of the shallow and deep covers as part of the soil station installed at each cover.

Soil temperature profiles at the coke watershed were also measured manually using thermocouple strings to verify the accuracy of the thermal conductivity sensors and to measure

spatial variability of the temperature data collected by the automated sensors. Between May 26 and June 14, 2005, two multi-level strings of thermocouples were installed in hand-augured boreholes (Figure 3.7a) on each cover near the east and the west end of both the shallow and the deep covers. The boreholes were advanced using a 100 mm (4") diameter auger. Extensions were added to the auger to reach depths up to 4.85 m. Each thermocouple string consisted of between 4 and 7 T-type thermocouple probes (model number TC-PVC-T-24-180) manufactured by Omega Engineering Inc. Construction details of the thermocouple strings can be found in Appendix B.

The strings were constructed with the measurement tips (Figure 3.7b and Figure 3.7c) placed at the desired location within a 1" PVC pipe (Figure 3.7d) with a cap at the bottom. The pipe with the thermocouple strings was then inserted into the hand-augured boreholes. Prior to capping and sealing the top of the pipes with silicone sealant, the pipes were filled with vegetable oil to enhance thermal transfer and create a better contact with the surrounding soil. After installation of the thermocouple nests, it was assumed that thermal equilibrium of the disturbed soil profile would occur within hours to days of the installation.

Manual measurements were recorded by connecting each thermocouple probe to a hand held digital thermometer (model HH501AT) manufactured by Omega.

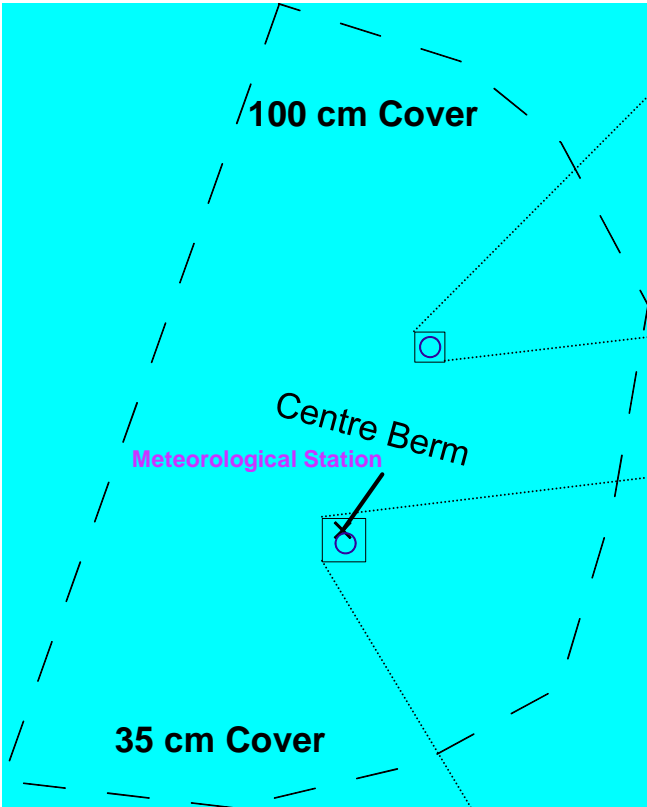
### **3.2.6 Soil Water Content**

Soil water content on the coke watershed was measured using time domain reflectometry (TDR) sensors and capacitance sensor probes.

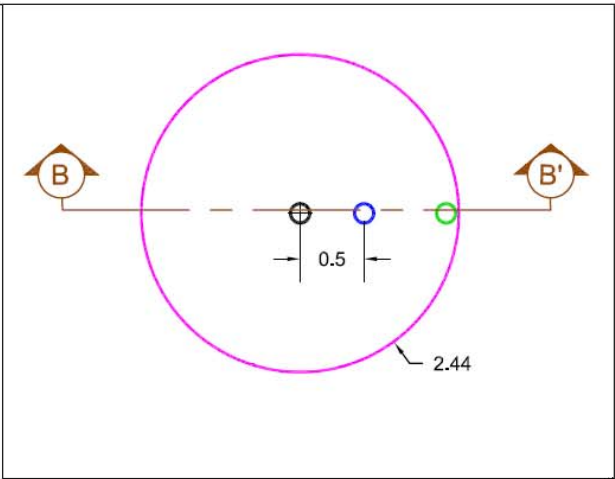
#### **3.2.6.1 Time Domain Reflectometry**

TDR sensors were installed in a single nest adjacent to the lysimeters on each cover. The sensors on each cover were placed to sufficient depths to determine the water content profile of the covers with sensors placed 5 cm above and below each soil interface.

Plan - Coke Test Cover Area



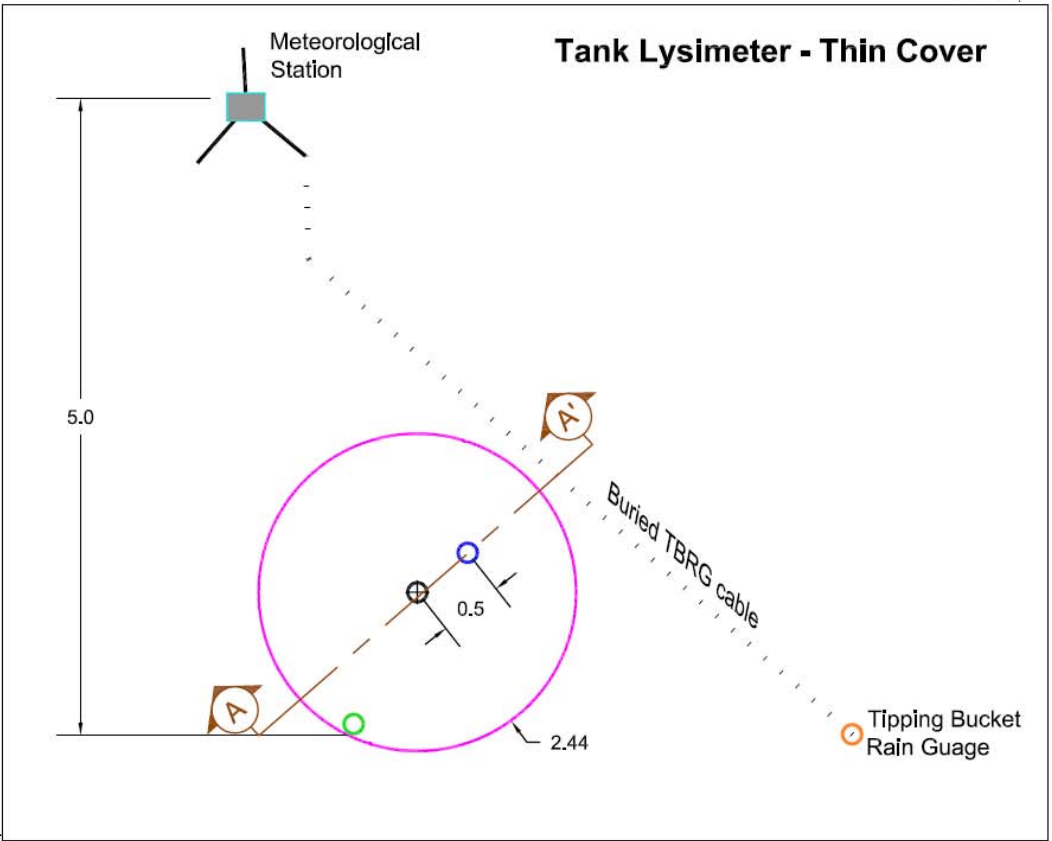
Tank Lysimeter - Thick Cover



LEGEND

- Piezometer
- Diviner 2000 Access Tube
- Gas Sampling Ports
- Tank Lysimeters

Tank Lysimeter - Thin Cover

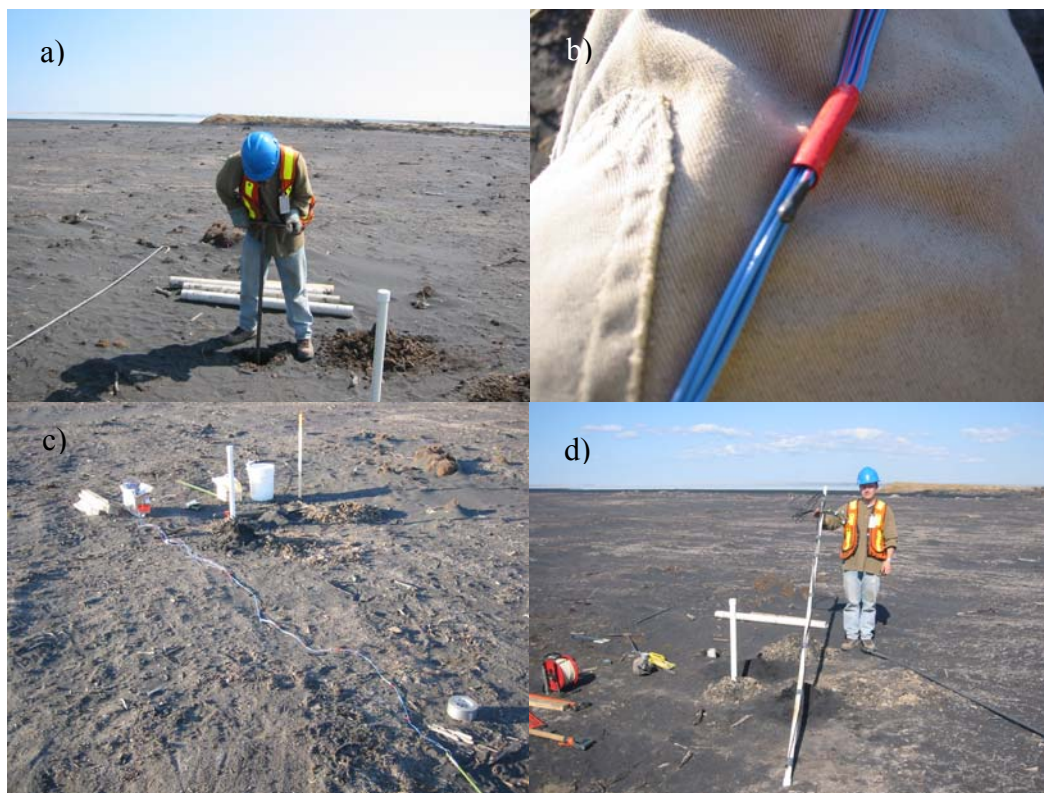


- Notes:
- 1.) All dimensions are in meters.
  - 2.) Relative locations of instrumentation shown are approximate.

Figure 3.5 - Meteorological station and tank lysimeter layout . (adapted from O'Kane 2004).



Figure 3.6 – Sections A-A' and B-B' (see Figure 3.5) of the tank lysimeters on the shallow and deep covers, respectively. (adapted from O'Kane 2004).



**Figure 3.7 – a) Hand-augering boreholes on the coke covers. b) Thermocouple tip attached in a string. c) Thermocouple string prior to installation. d) Thermocouple string inserted inside 1” PVC pipe prior to installation in the borehole.**

Automated CS616 sensors were used to measure the volumetric water content of the soil using the DAS. The sensors were installed at the same locations as the CS229 sensors as described in Section 3.2.2. Material specific calibration curves were developed for the CS616 sensors by OKC prior to installation. The calibration curves were derived using samples of each soil type at known water contents and probe output period. Calibration curves can be found in Appendix C.

### 3.2.6.2 Capacitance Sensors

A Diviner 2000 system was installed on each cover in the spring of 2005. Access tubes were installed at the east, central and west ends of the deep and shallow covers in addition to the access tubes that were already installed within the footprint of the tank lysimeters. The locations of the Diviner 2000 access tubes are shown on Figure 3.4.

A total of 8 Diviner access tubes were installed to a maximum depth of 160 cm, 4 on each of the shallow and deep covers. The Diviner probe measured water contents at 10 cm intervals

from 10 cm to 160 cm depth at each location. The access tubes located at the east and west sides of each cover were installed to study spatial variations in water profiles and the access tubes installed at the center of each cover were located adjacent to the lysimeters in order to verify TDR data. The access tubes installed within the lysimeters were located to study the effects of the lysimeters on the cover water profiles.

Installation procedures outlined by Sentek Pty Ltd. were used to install the access tubes (Sentek Environmental Technologies 1999). The installation procedure allowed for the least disturbance to the surrounding soil profile, to optimize contact between the access tubes and soil.

Soil water profile measurements were obtained using a portable probe connected to a display unit. The probe was swiped down the access tube at a constant rate until the bottom was reached (maximum of 160 cm) and then retracted again at a constant rate. The data remained in the handheld unit until downloaded at a computer station.

### **3.2.7 Groundwater**

Five standpipe piezometers were installed at the site to monitor and sample the groundwater below the covers. Installation was completed by hand using a 100 mm (4") hand auger. Extensions were added to the auger to reach depths more than 1.5 m. On the east end of the covers, groundwater was encountered within the coke layer causing the boreholes to slough. Therefore, drive point piezometers were installed. Boreholes were advanced to the apparent water table (saturated conditions) using hand auguring, then drive-point piezometers were driven into the coke. The piezometers were constructed using 38 mm PVC pipe coupled to stainless steel drive points with 60 cm screened sections. The piezometers were only installed at the east end of the coke watershed because the depth to groundwater at the west end of the covers was too deep for hand auguring. The piezometers were monitored to determine the location of the groundwater surface with respect to the coke covers. Groundwater samples were collected during this study for chemical analyses related to other ongoing studies; however, interpretation of this data was outside the scope of this study and is not included herein. Table 3.2 summarizes the construction of the piezometers. Piezometer construction logs are included in Appendix B. Piezometer locations are shown on Figure 3.4.

After installation, tar ingress into the piezometer well screen was noted in SPS050401 on the shallow cover and in SPD050402 on the deep cover and rendered the piezometers unusable. SPS050401 was abandoned and reinstalled approximately 10 m from the original location on the west end of the shallow cover. SPD050402 was abandoned and was not reinstalled because there were two other piezometers on the deep cover (SPD050403 and SPD050405) and groundwater monitoring was not a primary objective of this research.

Depth to the piezometric surface from the top of the piezometer casing was measured in each well using a Solinst water level meter. The groundwater elevation at each piezometer was then calculated by subtracting the depth to water measurement from the top of casing elevation.

A Syncrude standpipe piezometer, SP010402, was located at the west end of the shallow cover (Figure 3.4). This piezometer was not installed as part of this study, but was monitored for depth to water to estimate the groundwater elevation at the west end of the covers.

### **3.2.8 Soil Matric Suction**

Automated CS229 sensors were used to measure the soil matric suction using the DAS. The installation of these sensors is described in Section 3.2.2. The sensors were calibrated by OKC in their laboratory.

### **3.2.9 Soil Gas**

Measurement of soil gas concentrations was not a primary objective of this research project in terms of determining the water balance. However, monitoring of the soil gas served 2 purposes: to identify any potential adverse effects it may have on the performance of the covers; and, the soil gas data was relevant to other aspects of the overall coke watershed research project as discussed in Section 1.1. Therefore, to ensure the soil gas data collected over the course of this study is properly documented, it has been presented within this thesis for completeness of the dataset.



Table 3.2 - Summary of piezometer completions on the coke covers

Borehole ID	Date Completed	Cover	Northing	Easting	Auger Diameter (cm)	Well I.D. (mm)	End of Hole (m)	Screened Interval (m)		Sand-Pack Interval (m)		Bentonite Interval (m)		Stick-Up (m)
								from	to	from	to	from	to	
SPS050401*	6/14/2005	Shallow	52462.0	49977.8	8	38	4.52	3.92	4.52	-	-	1	3.6	0.51
SPD050402**	5/28/2005	Deep	52566.2	50014.6	8	38	4.5	3.00	4.50	3.0	4.5	1	3	0.71
SPD050403***	6/14/2005	Deep	52574.6	49981.8	8	38	4.85	4.25	4.85	-	-	1	3.9	0.17
SPS050404***	6/16/2005	Shallow	not measured	not measured	8	38	4.65	4.05	4.65	-	-	1	3.7	0.44
SPD050405***	6/16/2005	Deep	52574.0	49990.0	8	38	4.85	4.25	4.85	-	-	1	3.9	0.57
SP010402^	-		49977.8	52462.0	-	50	-	-	-	-	-	-	-	0.90

Note:

- Northings and Eastings are measured in Syncrude mine coordinates.

\*SPS050401 was originally installed on May 27, 2005, however tar ingress into the piezometer screen forced abandonment of the well. SPS050401 was re-augured and installed with a drive-point piezometer on June 14, 2005 in the location shown.

\*\* Tar ingress into SPD050402 was encountered shortly after installation, no water had been measured or detected in this piezometer.

\*\*\* Piezometers were installed using drive point piezometers. Auguring of boreholes was advanced as deep as possible then the well screens were driven to "refusal". Sand filters were not installed.

^ Piezometer SP010402 was installed by Syncrude at the MLSB prior to 2001. Information for this piezometer was supplied by Syncrude

In addition to the soil gas ports installed within the tank lysimeters on each cover, soil gas monitoring stations were also installed together with the thermocouple strings as discussed in Section 3.2.5. An individual gas sample port was located at the same depths as the thermocouple probes. Each port consisted of a 3-way sample valve (Figure 3.8a) at surface connected to ¼” HDPE tube. The sampling port within the soil consisted of a standard aquarium diffuser stone with a ¼” adapter connected to the ¼” HDPE tubing. The diffuser stone was wrapped in screen to reduce clogging of the diffuser (Figure 3.8b).

Gas monitoring stations constructed in the shallow and deep covers (Figure 3.8c) in the spring of 2005 were monitored for O<sub>2</sub> and CO<sub>2</sub> in 2005 and 2006. Measurements were made using a portable hand-held Electron Gastech GT CO<sub>2</sub> gas monitor (Figure 3.8d) which measured gas concentrations in per cent by volume of air. The gas probes were installed to a maximum depth of 4.7 m below grade on the shallow cover and 4.2 m below grade on the deep cover. The gas probes extended into the underlying sand tailings immediately below the coke-tailings interface. Details of the gas probe construction can be found in the borehole logs in Appendix B.



**Figure 3.8 – a) Gas probe with 3-way valve. b) Gas probe diffuser wrapped in screen. c) Gas probes attached to 1” PVC pipe prior to installation. d) Monitoring gas probes.**

### **3.3 Field Testing Program**

In addition to the instrumentation that was installed at the site, a program of *in situ* field measurements was conducted to obtain additional site data. The *in situ* field program included measuring the bulk density, and field saturated hydraulic conductivity of the covers as well as direct measurements of soil matric suction using tensiometers.

#### **3.3.1 Density Measurements**

The *in situ* wet and dry density of the cover soils at each soil station was measured using a Troxler 3440 Density Probe. An insertion rod was driven through a guide hole to the desired depth approximately 15 cm below the surface. The plate and rod were then removed and replaced by the Troxler density probe. The probe was pushed down into the hole and the density measurement was taken. Obtaining density measurements at depth required the removal of upper soil layers and placement of the probe on the newly exposed surface.

The complete testing procedure is outlined by the ASTM Standard Test method D-2922-96, 'Density of Soil and Soil-Aggregate in Place by Nuclear Methods' (American Society for Testing and Materials (ASTM) 2005).

#### **3.3.2 Saturated Hydraulic Conductivity Measurements**

Field measurements of hydraulic conductivity were taken using two methods: with a constant head well permeameter referred to as the Guelph Permeameter and, using slug-testing interpreted using the Hvorslev method (Hvorslev 1951).

Guelph permeameter testing involves the measurement of the steady-state infiltration rate required to maintain a steady depth of water in an uncased, cylindrical auger hole that terminates above the water table (Reynolds 1993). The values of field saturated hydraulic conductivity ( $K_{fs}$ ) that can be measured accurately with the Guelph permeameter range from  $1 \times 10^{-6}$  cm/sec to  $9 \times 10^{-2}$  cm/s. Beyond these limits there is a reduction in accuracy and precision (Soilmoisture 2008). The hydraulic conductivity was calculated in two ways (single-head and two-head method) as described by (Meiers 2002). The two-head equation can overestimate hydraulic conductivity compared to the single height equation for fine-grained material. Permeameter measurements were conducted on each cover in October 2005 and August 2006. Measurements

each year were taken in approximately the same location on each cover, approximately 10 m from the lysimeters on each cover.

Slug testing can be performed by either adding or removing a volume of water (or slug) from a well. The theory assumes that the slug is removed instantaneously. The change in hydraulic head (water level) is monitored with time. The Hvorslev method is an approximation of the more complex solution for transient flow.

### **3.3.3 Quick Draw Tensiometer**

The model 2900F1 Quick Draw tensiometer was used to measure the matric suction in the covers. It is designed to equilibrate rapidly with matric suction in soil, providing measurements of matric suction within a few minutes (Soilmoisture 2000). Use of this tensiometer is simple, quick and relatively accurate for measured suctions of less than 80 kPa. Use of the Quick Draw requires a soil coring tool to create an access hole to the desired measurement depth. The tensiometer is inserted into the access hole to the same depth and the ceramic sensing tip is placed in contact with the soil. Within a few minutes the tensiometer will come into equilibrium with the surrounding soil or the Null knob may be used to provide a more rapid measurement. The Null knob quickens the process by either increasing or decreasing the vacuum in the tensiometer, moving it closer to equilibrium with the soil. After equilibrium is reached and the measurement is recorded the quick draw is returned to a water reservoir in the carrying case to reset the gauge to zero and keep the sensor tip moist until the next use. Tensiometer measurements were taken on September 20, 2006. Measurements were taken in each cover in two locations, at the centre of each lysimeter and 1 m outside the footprint of each lysimeter.

## **3.4 Laboratory Testing Program**

### **3.4.1 Grain-Size Distribution**

The procedure for determining the grain size distribution of a soil is specified in ASTM D422-63 (ASTM 1990). Grain size distributions were completed on two samples of coke. The grain-size distributions were used to determine the relative uniformity of the coke by calculating the coefficient of uniformity,  $C_u$ , (Holtz and Kovacs 1981).  $C_u$  a crude shape parameter and defined as

$$C_u = \frac{D_{60}}{D_{10}} \quad (12)$$

where  $D_{60}$  and  $D_{10}$  are the grain diameter at 60% and 10% passing on the grain-size distribution. Filter sand would typically have a  $C_u$  from 1.5 to 2.5, and a well-graded sand has a  $C_u$  more than 6 (Holtz and Kovacs 1981).

### 3.4.2 Soil Water Characteristic Curve

ASTM D6836-02 (ASTM 2003) Method C was used to measure the SWCC for two coke samples and two undisturbed secondary samples. This method involves the use of a pressure chamber (Tempe cell) to apply a suction in pressure increments from 0 to 500 kPa and measuring the corresponding gravimetric measurements of water content. Due to the hydrophobic nature of the coke, and in order to ensure that the coke samples were fully saturated prior to starting the tests, the samples were mixed vigorously with sufficient water to pre-wet the samples. The saturated samples were then placed into the Tempe cell testing apparatus and prepared for testing. The coke samples were then allowed to drain at 0 kPa pressure for at least 24 hours to allow any excess water to drain before starting the test.

Due to the limited suction range of the pressure plate method, testing on the secondary material was also conducted with a chilled mirror hygrometer (Decagon Devices Inc. 1998-2003) which employs ASTM D6836-02 (ASTM 2003) Method D. The procedure involves drying small samples to known water contents and measuring the suction with the hygrometer for pressure ranges from 500 kPa up to 100 MPa. The potentiometer measures soil suction from 0 to 10 MPa  $\pm 0.1$  MPa and  $\pm 1\%$  for measurements above 10MPa.

The SWCC curves for the secondary were created by combining the test results using the pressure plate method for the lower suction range and the chilled mirror hygrometer for the higher suction range.

### 3.4.3 Hydrophobicity of Fluid Coke

Laboratory experiments related to unstable gravity-flow through hydrophobic porous media were conducted on two samples of coke. The procedure used for these tests was the water drop penetration time (WDPT) test outlined in (Nieber et al. 2000). The test was conducted on air-dried and saturated coke.

## CHAPTER 4 PRESENTATION OF DATA

This chapter presents the results of the laboratory and field portions of the research project as outlined in the previous chapter. The laboratory test results for cover soils and coke properties are presented first, followed by the field portion in two parts; *in situ* testing of soil properties followed by field data describing the performance of the cover systems. The DAS generated a large amount of data which has been provided for reference in the CD enclosed with this thesis.

### **4.1 Laboratory Test Results**

#### **4.1.1 Grain-Size Distribution**

The results of the grain-size analysis for coke using mechanical sieving procedures are presented in Figure 4.1. MDH Engineered Solutions of Saskatoon independently measured the grain-size distribution of coke and these results are also included in Figure 4.1 for comparison. The grain size distribution results for all tests were similar.

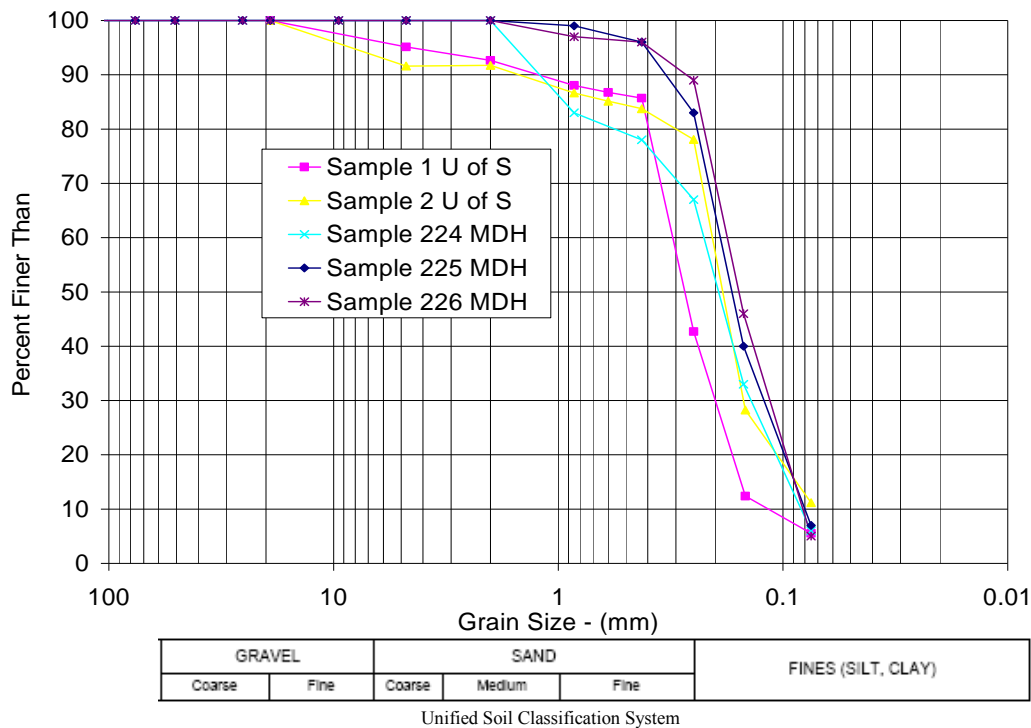
The results indicated that, based on the Unified Soil Classification System (USCS), the coke would be considered a fine to medium-grained sand, with the predominant grain-size falling between 0.075 mm and 2 mm. Over 90% of the coke particles fall within the medium to fine-grain sand size classification. The average  $C_u$ , the ratio of particle diameters at 60% and 10% passing on the grain-size distribution (Figure 4.1) for the two coke samples was 2.49, indicating a relatively uniform material.

#### **4.1.2 Soil-water Characteristic Curves**

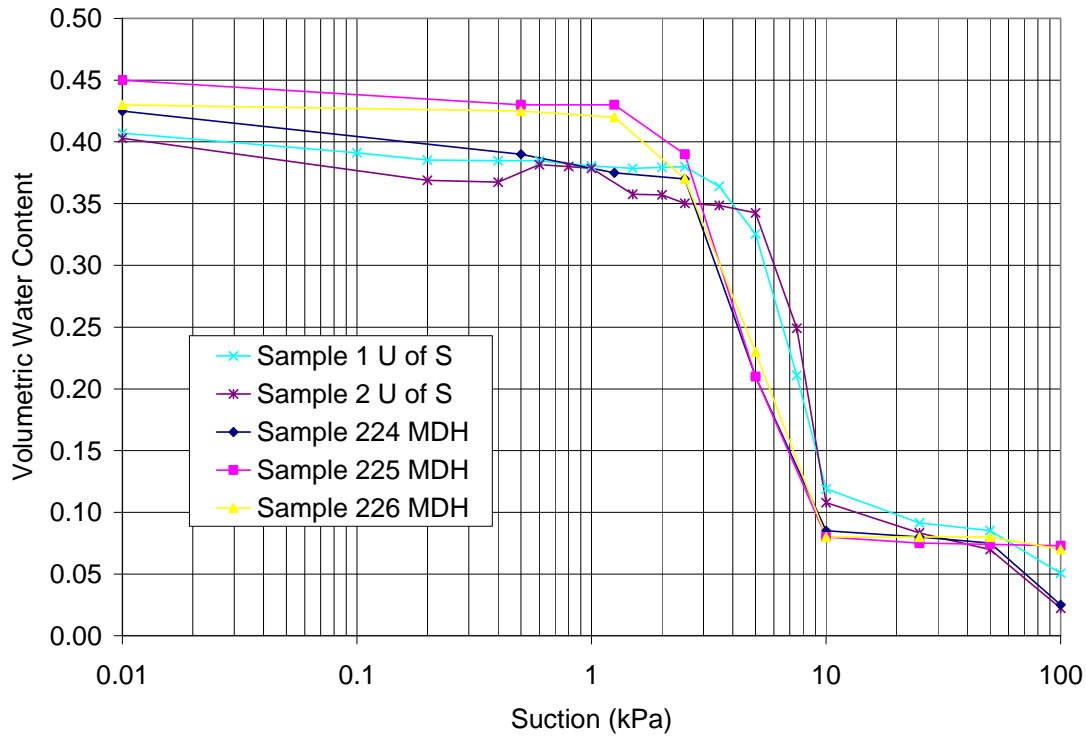
The SWCC for coke was measured for two samples. Since the suction at the residual water content is relatively low, the SWCC measurements were completed with the pressure plate apparatus technique (Tempe cell), as described in Chapter 3. The results of the SWCC testing are presented in Figure 4.2. For comparison purposes, the SWCCs measured by MDH are also presented. The SWCCs were similar to those produced by MDH. At low suctions there is a wider range of water contents, likely due to variations in sample preparation (compaction density

and water content). However, at suctions higher than the air-entry value for each sample, the water contents are more closely grouped since water retention is controlled more by finer pores which are less affected by initial compaction conditions.

It is clear in these results that once water-wet, the coke does exhibit capillarity since there is a defined air-entry value for the coke from approximately 2 to 4 kPa for the samples measured. The residual volumetric water content of the coke is approximately 8%. Samples 1, 2 and 224 show a sharp drop in water content at 100 kPa suction. This is a result of drainage of the 1 bar pressure plates used in each test and not actual drainage from the sample. Given that the samples all have a clear air-entry value it is evident that they are all hydrophilic once saturated.



**Figure 4.1 Grain-size distribution for Syncrude coke samples.**

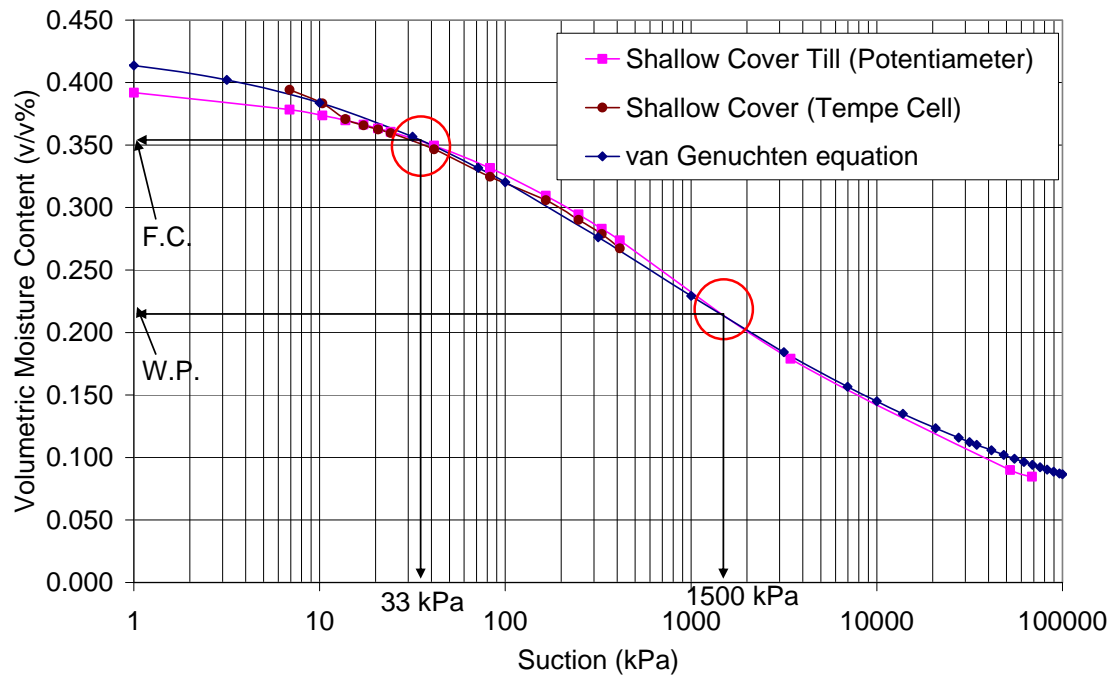


**Figure 4.2 SWCC for Syncrude coke**

The SWCC for the secondary material in the covers was measured using both the standard pressure plate apparatus technique and the chilled-mirror dewpoint (hygrometer) technique as described in Section 3.4.2. Figure 4.3 presents the results of the SWCC measurement for the secondary in the coke cover. It should be noted that for values of suction below 100kPa, the dewpoint potentiometer is not considered reliable due to the accuracy of the instrument at such low suction values.

The field capacity and wilting point of the secondary material, which were assumed to occur at 33 kPa and 1500 kPa suction, respectively, are approximately 0.35 and 0.21, respectively. Figure 4.3 also presents a comparison of the laboratory data with the estimated SWCC using the van Genuchten equation. The estimated curve fits the laboratory data well with constants of  $\alpha = 1068$ ,  $n = 0.53$ ,  $m = 0.51$  and  $\theta_s = 0.40$ .





**Figure 4.3** SWCC for secondary material in Syncrude coke soil cover. FC is the field capacity and WP is the wilting point.

#### 4.1.3 Water-drop Penetration Test for Hydrophobicity

A simple test called the water-drop penetration time (WDPT) test was performed to quantify the hydrophobicity of the Syncrude coke. Table 4.1 presents the WDPT results for Syncrude coke. Soils with WDPT times <5 s are considered wettable or hydrophilic and >3600 s are considered extremely water repellent (Bisdorn et al. 1993).

The results of the WDPT indicate that air-dried Syncrude coke is considered extremely water repellent or hydrophobic with penetration times exceeding 3600 s. However, saturated coke is not significantly hydrophobic, and penetration times were nearly instantaneous. These results are similar to a study conducted by Priyashantha and Barbour (2007) on delayed coke (Suncor coke) which also showed “extreme” hydrophobicity for air-dried samples and no significant hydrophobic effects for saturated samples.

**Table 4.1 Results of the water-drop penetration times for Syncrude coke**

	<b>Moisture Level</b>	<b>WDPT Mean times (sec) n = 5</b>	<b>Severity of Water Repellency (Bisdorn et al. 1993)</b>
<b>Syncrude Coke</b>	Air Dried	>3600	Extremely water repellent (hydrophobic)
	Saturated	<1	Wettable (hydrophilic)

## 4.2 In Situ Testing Results

### 4.2.1 In Situ Density

The *in situ* density was measured using a Troxler nuclear densometer as described in Section 3.3.1. Table 4.2 summarizes the field measurements for the peat-mineral mix and the secondary. Seven measurements of density were taken in each of the peat-mineral mix and the secondary.

The dry density of the peat-mineral mix ranged in value from 631 kg/m<sup>3</sup> to 1,418 kg/m<sup>3</sup>. The dry density of the secondary material ranged from 1021 kg/m<sup>3</sup> to 1,561 kg/m<sup>3</sup>. The mean dry density for the peat-mineral mix on the shallow cover was 945 kg/m<sup>3</sup>, which was 14.9% lower than the mean dry density of 1,097 kg/m<sup>3</sup> for the deep cover. Similarly, the mean dry density of the shallow cover secondary was 1,232 kg/m<sup>3</sup>, which was approximately 15.7% lower than the mean dry density of 1,442 kg/m<sup>3</sup> on the deep cover. The values presented in Table 4.2 are comparable to densities for similar peat-mineral mix and secondary as reported by Boese (2003) for the 30 Dump. The average dry densities for the peat-mineral mix were 978 kg/m<sup>3</sup> on the coke watershed and 919 kg/m<sup>3</sup> on the 30 Dump, a difference of 6.2%. The average dry densities for the secondary were 1364 kg/m<sup>3</sup> on the coke watershed and 1,279 kg/m<sup>3</sup> on the 30 Dump, a difference of 6.4%.

Table 4.3 summarizes the porosity range for the peat-mineral mix and the secondary materials used for the coke covers.

**Table 4.2 In situ average dry densities using a nuclear densometer**

<b>Material</b>	<b># of Samples</b>	<b>Maximum (kg/m<sup>3</sup>)</b>	<b>Minimum (kg/m<sup>3</sup>)</b>	<b>Std. Dev. (kg/m<sup>3</sup>)</b>	<b>Mean (kg/m<sup>3</sup>)</b>
<b>Deep Cover</b>					
Peat-mineral	4	1418	631	339	1097
Secondary	5	1561	1333	93	1442
<b>Shallow Cover</b>					
Peat-mineral	4	1156	599	260	945
Secondary	3	1417	1021	199	1232
<b>Total</b>					
Peat-mineral	8	1418	599	313	978
Secondary	8	1561	1021	168	1364

**Table 4.3 Summary of soil properties used for the coke covers**

<b>Material</b>	<b>Porosity, n</b>			<b>Specific Gravity</b>
	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	
<b>Deep Cover</b>				
Peat-mineral	0.47	0.76	0.59	2.66
Secondary	0.40	0.49	0.45	2.62
<b>Shallow Cover</b>				
Peat-mineral	0.57	0.75	0.64	2.66
Secondary	0.46	0.61	0.53	2.62

The corresponding porosity of the peat-mineral mix ranged from 0.47 to 0.76 and the corresponding porosity for the secondary material ranged from 0.40 to 0.61. The specific gravity used for the peat-mineral mix was 2.66 and the specific gravity used for the secondary was 2.62 (Shurniak 2003).

## **4.2.2 In Situ Saturated Hydraulic Conductivity**

### **4.2.2.1 Guelph Permeameter Testing**

The field saturated hydraulic conductivity,  $K_{fs}$ , of the Syncrude coke and secondary was measured *in situ* using a Guelph permeameter. Tests were conducted in 2005 and in 2006 to monitor potential trends in  $K_{fs}$  as the covers age. The results are presented in Table 4.4.

**Table 4.4 Average  $K_{fs}$  values for Syncrude coke watershed using Guelph permeameter**

Year	Geometric Mean $K_{fs}$ (m/s)		
	Secondary (Deep Cover)	Secondary (Shallow Cover)	Syncrude Coke
2005	$9.1 \times 10^{-7}$ n = 6 SD = $2.1 \times 10^{-6}$	$6.1 \times 10^{-6}$ n = 4 SD = $3.8 \times 10^{-6}$	$1.8 \times 10^{-4}$ n = 4 SD = $3.8 \times 10^{-5}$
2006	$4.4 \times 10^{-6}$ n = 6 SD = $3.7 \times 10^{-6}$	not measured	$4.4 \times 10^{-5}$ n = 1

Over the period of testing it was found that the  $K_{fs}$  of the secondary increased slightly and the  $K_{fs}$  of the coke decreased slightly from 2005 to 2006. The test results for the secondary correspond well (within the same order of magnitude) to results from Boese (2003). The average  $K_{fs}$  measured for the secondary material in the first and second year of that study were  $4.7 \times 10^{-7}$  and  $5.8 \times 10^{-6}$  m/s, respectively. The  $K_{fs}$  measured for the Syncrude coke was similar to the literature values for the hydraulic conductivity of Syncrude coke ranging from  $1 \times 10^{-6}$  to  $1 \times 10^{-5}$  m/s (Scott and Fedorak 2004).

#### 4.2.2.2 Slug Testing

Slug testing was performed on piezometer SPS050404 during the 2005 field season to measure the saturated hydraulic conductivity,  $K$ , of the coke below the water table. The results of the slug testing were analyzed using the Hvorslev (1951) method. The value of  $K$  was determined to be  $2.9 \times 10^{-4}$  m/s. This compared well to the Guelph permeameter testing for 2005 (Table 4.4) with a  $K_{fs}$  of  $1.8 \times 10^{-4}$ .

### 4.3 Field Instrumentation Monitoring Results

The following section presents the monitoring results from the field instrumentation installed on the Syncrude coke watershed. The data includes meteorological station data, soil station data and manual monitoring of moisture, gas and temperature profiles. The data was inspected by OKC for quality and manually adjusted to remove false readings (e.g. negative relative humidity) and readings that were outside the expected range of the instruments.

#### 4.3.1 Meteorological Station Data

The data presented in this section was collected from the weather station located on the Syncrude coke watershed. This meteorological station collected data for temperature, precipitation (rainfall only), relative humidity, wind speed and net radiation. Environment Canada has a permanent weather station at Mildred Lake near the Syncrude site, approximately 1 km east of the Syncrude extraction plant. Data collected from both stations is compared, where corresponding data exists. Data collected for 2006 includes data up to September 30, 2006.

#### 4.3.2 Precipitation

The tipping bucket rain gauge on the Syncrude coke watershed was not equipped with a snowfall adapter and, therefore, could not accurately measure snowfall. Therefore, precipitation recorded at the Syncrude coke watershed station during the frozen winter months was subtracted from the data. Snow surveys were completed annually in late winter (March 5, 2005 and on February 15, 2006) to measure the total snowpack on the coke watershed. A summary of the data collected during these surveys is presented in Table 4.5.

**Table 4.5 Summary of snow survey data for 2005 and 2006 across the coke watershed**

<b>Year</b>	<b>Average Snow Depth (cm)</b>	<b>Average Snow Density (kg/m<sup>3</sup>)</b>	<b>Snow-Water Equivalent (mm)</b>
2005	38.3	285	109
2006	24.4	176	42.9 (64.3*)

\*21.4 mm SWE fell after February 15, 2006 based on snowfall records from the Mildred Lake weather station, the corrected value is 64.3 mm SWE.

After the 2006 snow survey was completed on the coke watershed, an additional 21.4 mm SWE was measured at Environment Canada's Mildred Lake station (between February 15 and March 31, 2006). This SWE data was added to the coke watershed data to give a corrected SWE for 2006; including this additional snowfall, the SWE was 64.3 mm.

The precipitation measured for the Syncrude coke watershed in 2005 was 348.2 mm as rainfall and 109 mm SWE, giving a total precipitation in 2005 of 457.2 mm. The rainfall, SWE and total precipitation for the Mildred Lake station in 2005 was 408.6 mm, 95.3 mm, and 503.9 mm, respectively. The relative difference between the 2 stations for rainfall, SWE, and total precipitation was 16.0%, 13.4%, and 9.7%, respectively.

For the period of January 1 to September 30, 2006, the rainfall, SWE, and total precipitation for the Syncrude coke watershed was 292.3 mm, 64.3 mm, and 356.6 mm, respectively; the corresponding precipitation at the Mildred Lake station for the same period was 302.8 mm, 52.5 mm, and 355.3 mm, respectively. The relative difference between the 2 stations for rainfall, SWE, and total precipitation was 3.5%, 20.2%, and 0.4%, respectively.

The average rainfall, SWE, and total precipitation measured at the Environment Canada Fort McMurray airport station, based on 30 years of records from 1971 to 2000, was 342.2 mm, 113.3, and 455.5, respectively. Figure 4.4 presents the precipitation data for Fort McMurray, Mildred Lake and the Syncrude coke watershed stations.

A break down of the monthly precipitation data is presented in Figure 4.5. The SWE amount measured during the snow surveys for the Syncrude coke watershed appears in March of each year to approximate the total snowpack present at the end of winter, prior to spring melt. On average, the rainiest season is during summer (June, July and August) where 44% of the annual precipitation falls, and the driest season is winter (January, February, March) where only 11% of the annual precipitation falls.

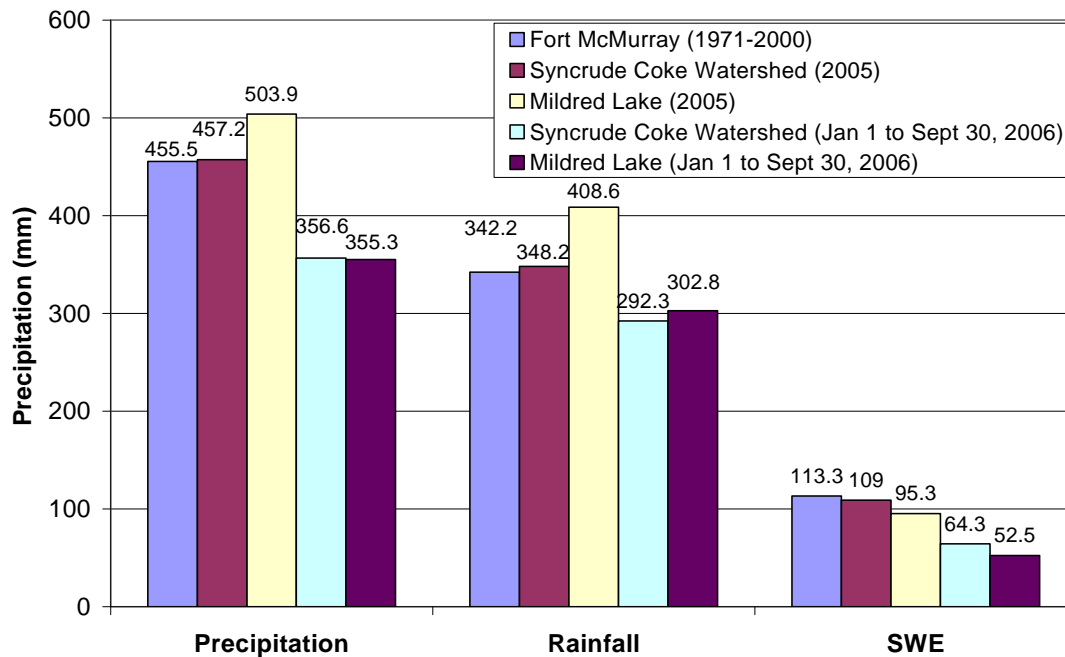
The daily precipitation for the Mildred Lake station and the Syncrude coke watershed tipping bucket can be seen in Figure 4.6. The cumulative precipitation recorded by the on-site tipping bucket including the measured SWE was 813.8 mm, from January 1, 2005 to September 30, 2006. The cumulative precipitation recorded at the Mildred Lake station was 859.2 mm for the same period, a difference of 45.4 mm, or 5.4%.

### **4.3.3 Air Temperature**

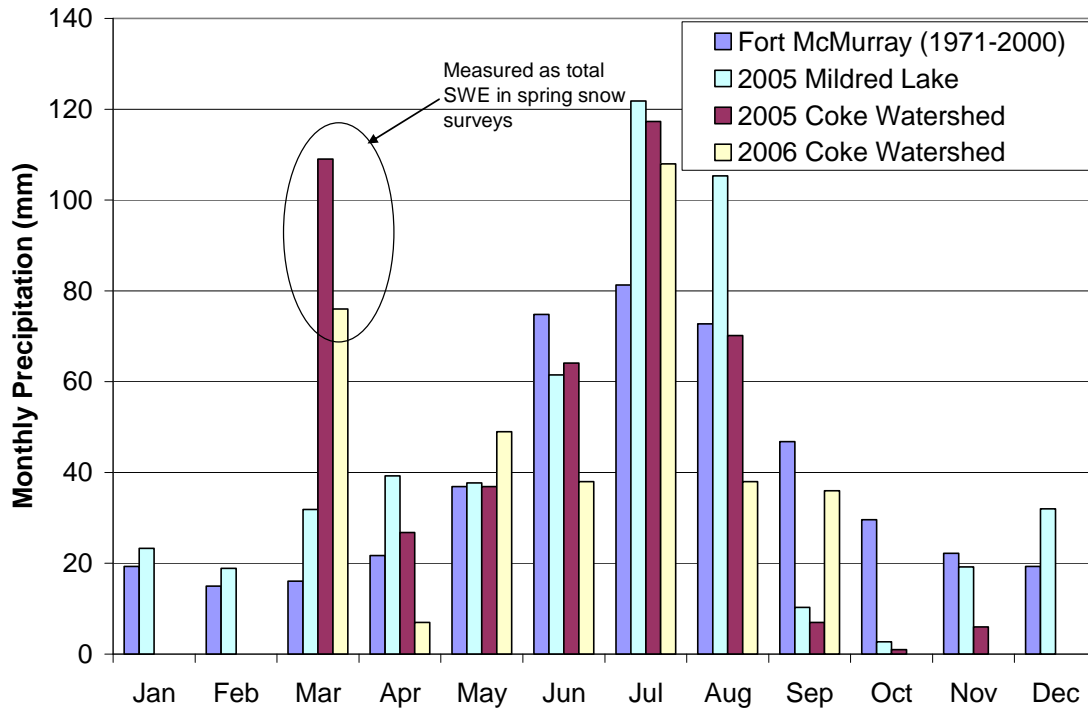
The average daily air temperature recorded at the coke watershed was verified with the Mildred Lake station and presented in Figure 4.7.

The historical monthly average temperatures for the Fort McMurray airport, and the average monthly temperatures for the coke watershed and Mildred Lake are shown in Figure 4.8. The historical monthly average high and low temperatures for Fort McMurray are 16.8 °C in July and -18.8 °C in January. The average monthly highs for 2005 at the Syncrude coke watershed and the Mildred Lake station were 18.5 °C and 17.0 °C, respectively, both occurring in June 2006. The average monthly lows were -18.5 °C and -18.2 °C, respectively, both occurring in January

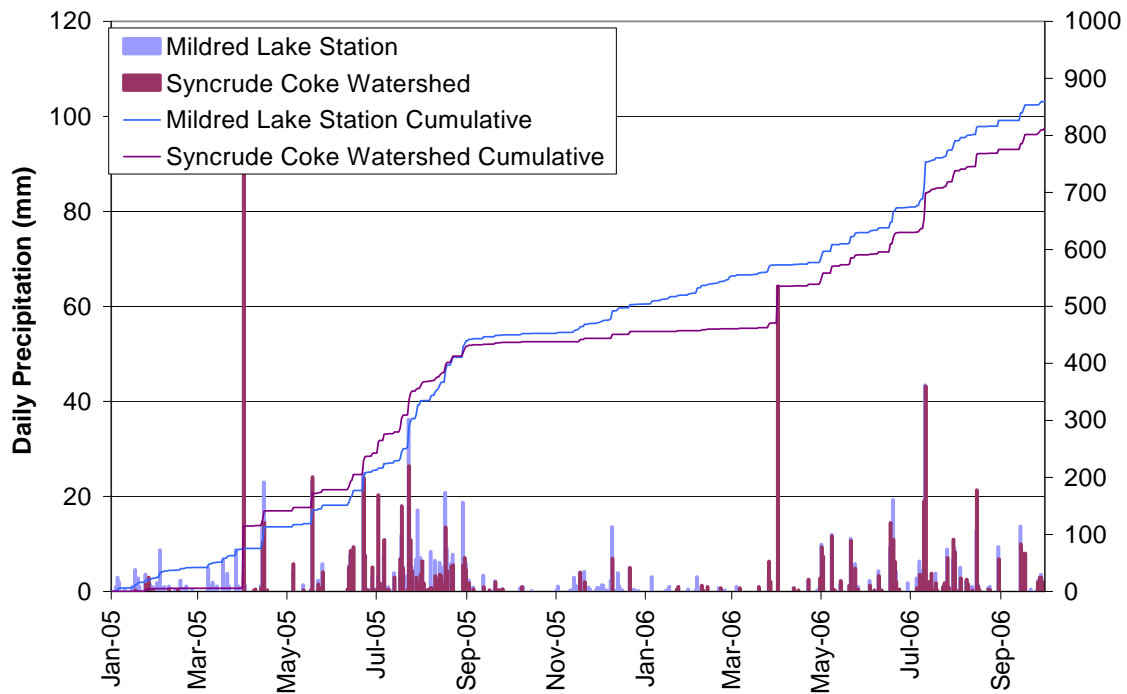
2005. The monthly temperatures were similar to the historical averages with the exception of November and December 2005, which had monthly temperatures considerably higher than the long term average, averaging 5.3 °C and 8.2 °C warmer, respectively.



**Figure 4.4 Comparison of precipitation for the Syncrude coke watershed, the Mildred Lake station and regional normal precipitation for the Fort McMurray airport.**

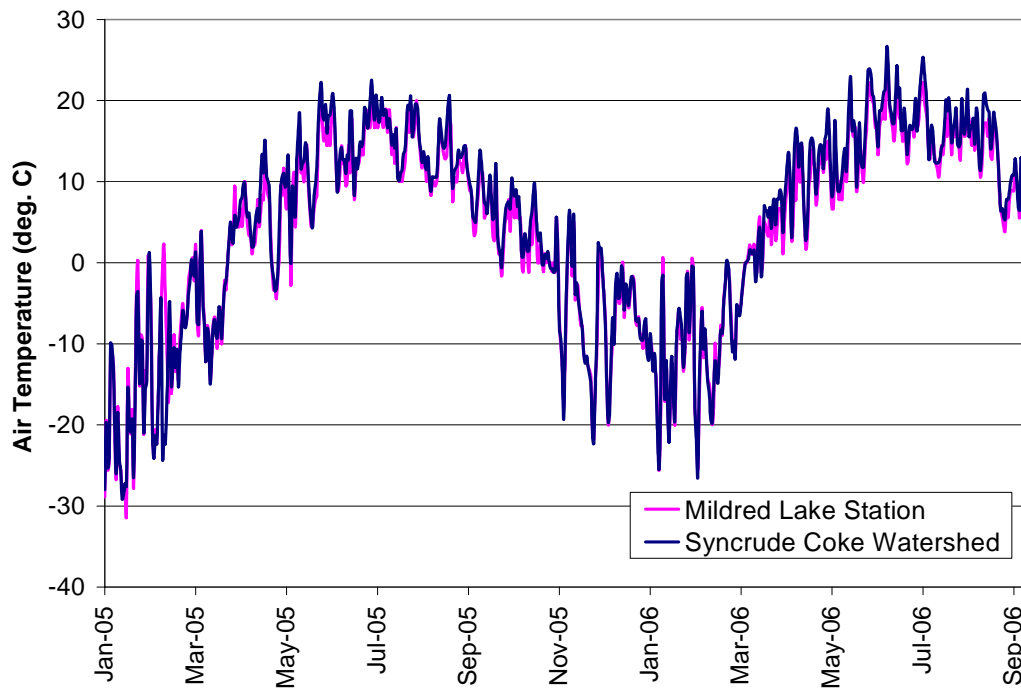


**Figure 4.5 Comparison of monthly precipitation for the Syncrude coke watershed and the Mildred Lake station. Regional normals for Fort McMurray are also shown.**

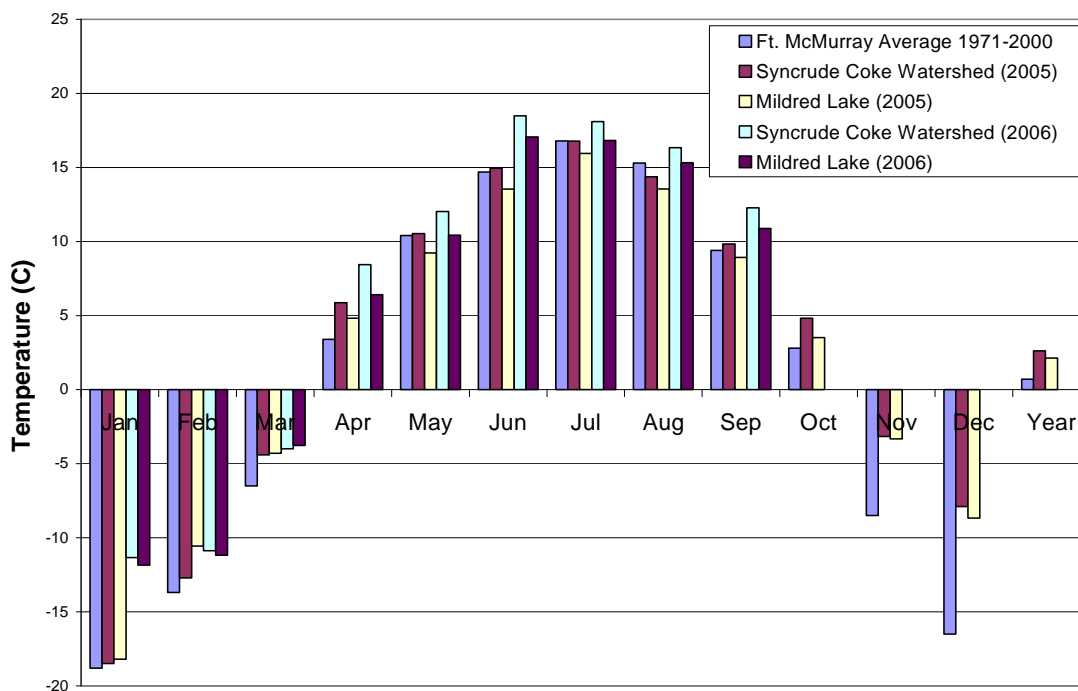


**Figure 4.6 Comparison of daily precipitation for the Syncrude coke watershed and the Mildred Lake station.**





**Figure 4.7 Daily air temperature for the Suncrude coke watershed and the Mildred Lake weather stations for 2005**

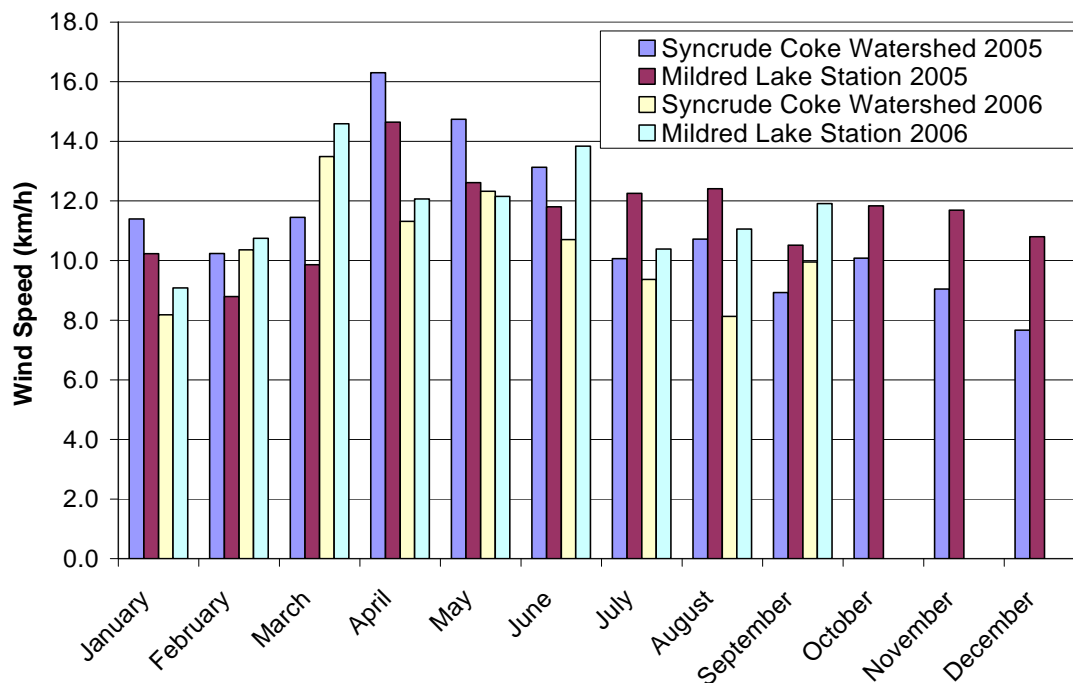


**Figure 4.8 Average daily temperatures for Fort McMurray, Mildred Lake and Syncrude coke watershed**

#### 4.3.4 Wind Speed

The average annual recorded wind speed was 11.1 km/hr in 2005 and 10.4 km/hr in 2006 at the coke watershed and 11.5 km/hr in 2005 and 11.8 km/hr in 2006 at the Mildred Lake station. The average monthly wind speed recorded at the coke watershed and the Mildred Lake station are compared in Figure 4.9. The average monthly wind speed at each station was reasonably similar with the wind speed being higher at the Mildred Lake station by 3.5% in 2005 and by 12.6% in 2006.

The monthly mean wind speed ranged from a low of 7.7 km/hr in December 2005 to a high of 16.3 km/hr in April 2005 at the coke watershed and from a low of 8.8 km/hr in February 2005 to a high of 14.6 km/hr in April 2005 and March 2006 at the Mildred Lake station.



**Figure 4.9 Comparison of mean wind speed for the Syncrude coke watershed and the Mildred Lake station.**

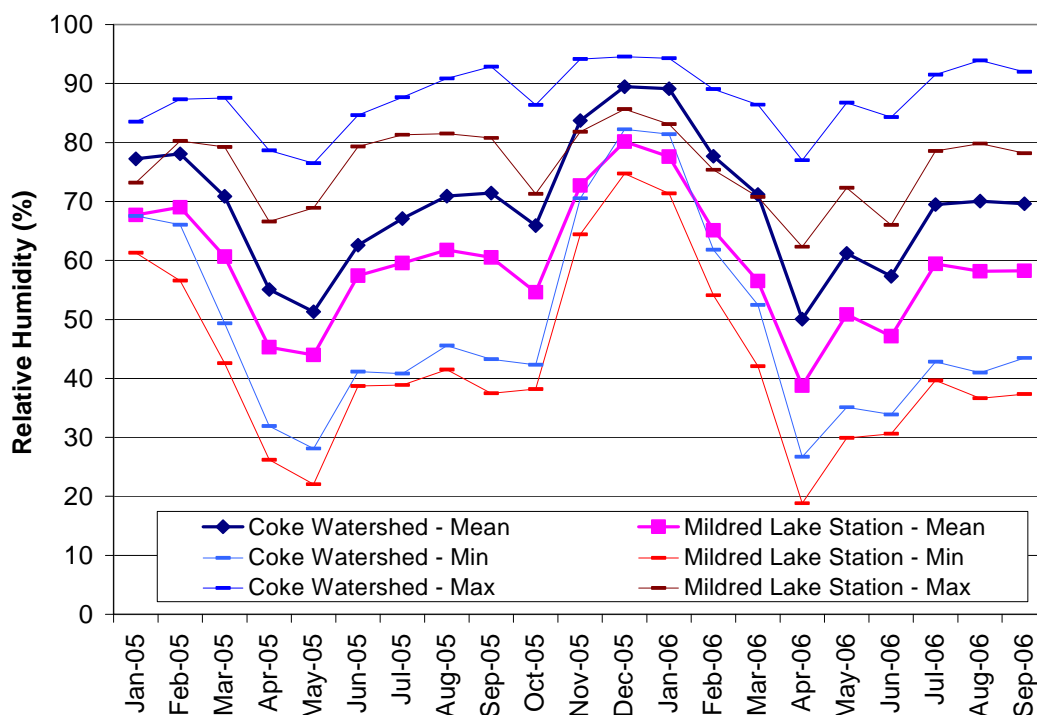
#### 4.3.5 Relative Humidity

The minimum, mean and maximum monthly values of relative humidity recorded at the coke watershed and the Mildred Lake station from January 2005 to September 2006 are presented in Figure 4.10. The coke watershed data ranged from a low of 27% in April 2006 to a high of 95%

in December 2005. The Mildred Lake data ranged from a low of 19% in April 2006 to a high of 86% in December 2005. The coke watershed measured consistently higher monthly relative humidity than the Mildred Lake station over the study period, on average 14% higher.

#### 4.3.6 Net Radiation

Daily and cumulative radiation for the Syncrude coke watershed is illustrated in Figure 4.11 for 2005 and Figure 4.12 for 2006. Problems with the radiometer resulted in periods of time with no data collection. Net radiation data was missing for a significant period in late spring from May 11 to June 20, 2005; a period of rapidly increasing daily radiation. The net radiation measurements at this time of year would have a significant effect on the cumulative radiation for the year. To calculate the water balance, the cumulative net radiation is required to calculate the potential evaporation at the coke watershed. Therefore, net daily radiation measured at the Syncrude coke watershed over the same period (May 11 to June 20) in 2006 was also used for 2005. Figure 4.12 presents the cumulative radiation corrected for missing data from May 10 to June 21, 2005.



**Figure 4.10 Comparison of mean, minimum and maximum relative humidity for the Syncrude coke watershed and the Mildred Lake weather station**

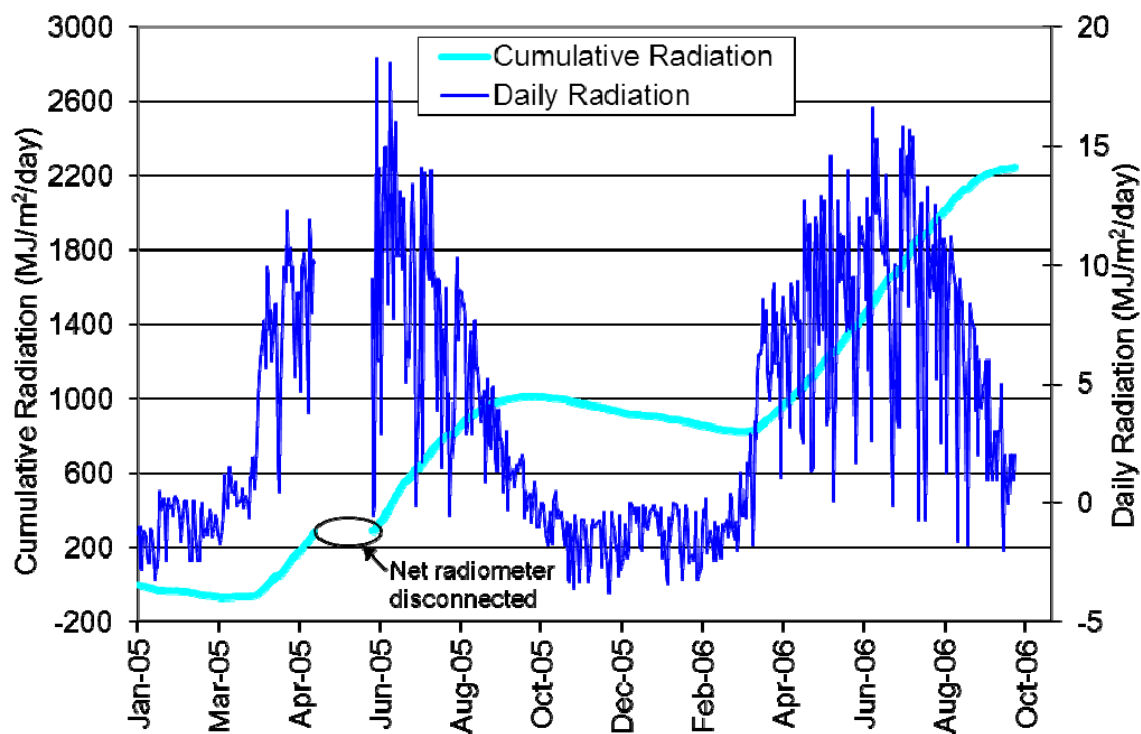


Figure 4.11 Cumulative and daily net radiation for 2005-2006 measured on the Syncrude coke watershed.

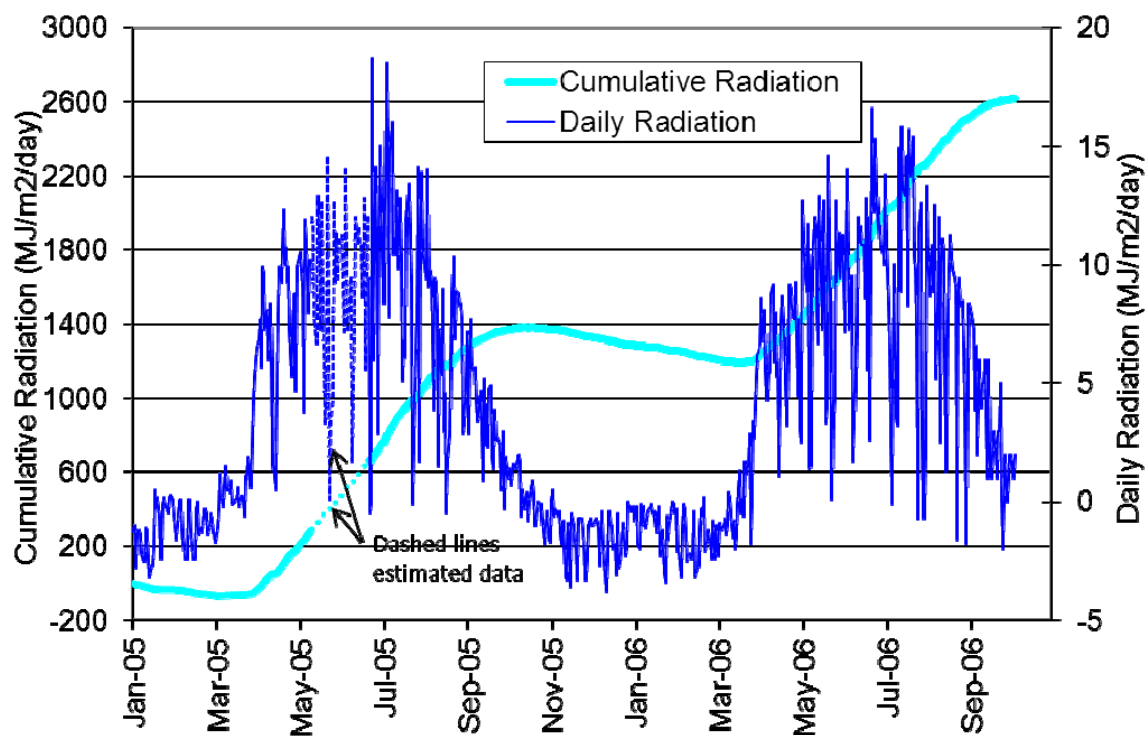


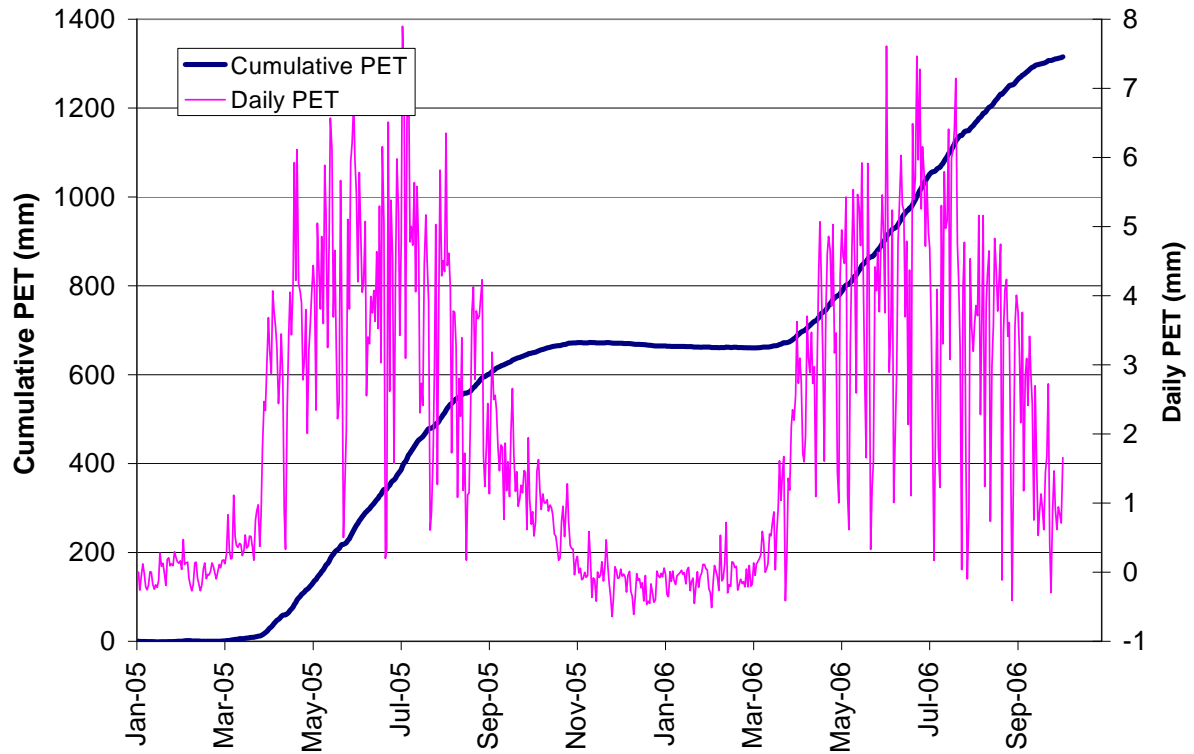
Figure 4.12 Cumulative and daily radiation for 2005-2006 measured on the Syncrude coke watershed corrected for missing data.

#### **4.3.7 Potential Evaporation**

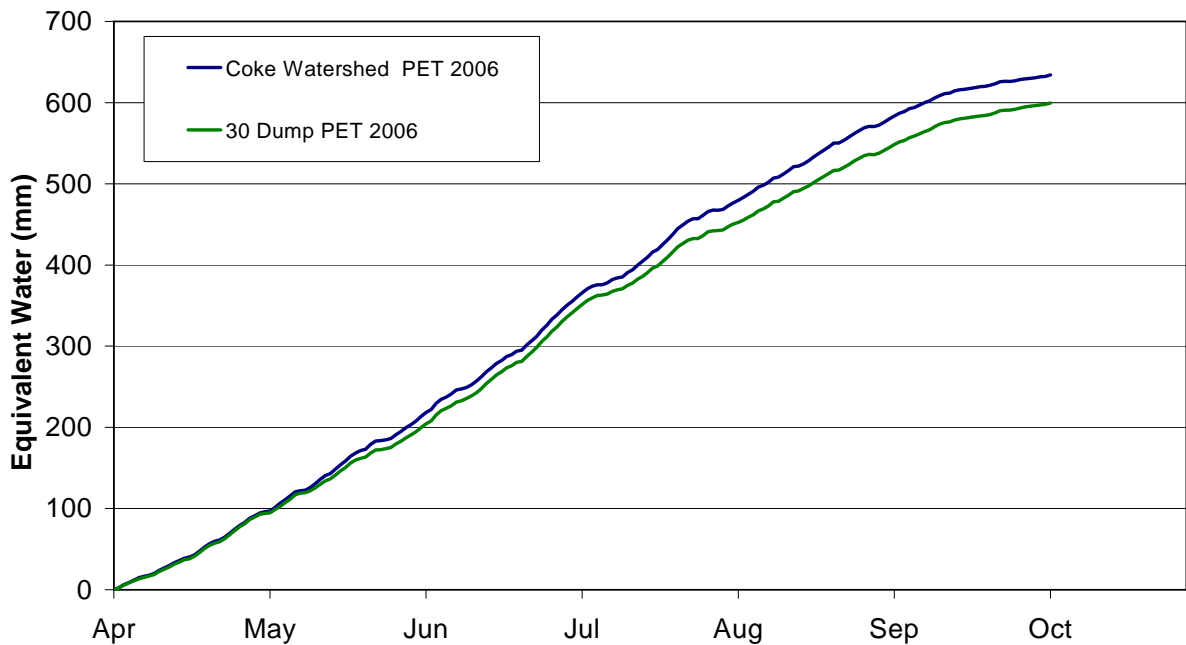
The potential evaporation (PET) was calculated using the modified Penman method using average field values of temperature, wind speed, relative humidity, and net radiation. PET is not directly used to calculate the water balance. However, PET is used to estimate AET, which AET is used in the calculation of the water balance in Chapter 5.

The daily and cumulative PET for the coke watershed for 2005 and 2006 are illustrated in Figure 4.13. The corrected cumulative PET for 2005 was 672 mm in November. In 2006, the cumulative PET was 1315 mm on October 4, 2006, the last date of available data for 2006. Daily values of PET reached peak values in June and July for both years of between 6 and 7 mm. PET for the Syncrude coke watershed could not be compared to the Mildred Lake station data since the Mildred Lake station did not measure net radiation.

Figure 4.14 compares the cumulative PET during the field season (April 1 to October 30) for the coke watershed and Syncrude's 30 Dump research site for 2006. There was a large period of missing data during the 2005 field season for the 30 Dump site when a radiometer was not functioning, therefore, PET computed for 2005 is not included. PET for the coke watershed was higher than the 30 Dump site at the end of the field season (September 30) in 2006 by 5.5%.



**Figure 4.13 Cumulative and daily PET computed for the Syncrude coke watershed for 2005.**



**Figure 4.14 Cumulative PET for the coke watershed compared to cumulative PET for the Syncrude 30 Dump for 2006.**

#### 4.3.8 Soil Temperature

The soil temperature profiles measured by the thermocouple strings for the shallow cover at the west and east sides are presented in Figure 4.15 and Figure 4.16, respectively, and for the deep cover are presented in Figure 4.17 and Figure 4.18, respectively. These figures present only select data to show trends in the soil profiles, the complete dataset can be found in Appendix D. The temperatures measured in both the shallow and deep covers using the thermocouples were similar. The soil temperatures measured in the shallow cover ranged from a minimum of -8.0 °C in February 2006 to a maximum 24.4 °C in July 2006. The temperatures measured in the deep cover ranged from -3.6 °C in February 2006 to 23.6 °C in July 2006. The temperatures in the coke immediately below the deep cover ranged from -3 °C in February 2006 to 20.6 °C in July 2006. At the base of the coke immediately above the underlying coke-sand tailings interface, the temperatures ranged from 10.3 °C in February 2006 to 17.7 °C in October 2005 below the shallow cover and from 8.9 °C in May 2006 to 13.4 °C in October 2005 below the deep cover. Temperatures in the sand tailings immediately below the coke-sand tailings interface ranged from 12.0 °C in February 2006 to 17.6 °C in October 2005 below the shallow cover and from 9.3 °C in February 2006 to 12.8 °C in October 2005.

The soil temperature data collected using the CS229 thermal conductivity sensors was compared with the thermocouple measurements. Temperature profiles measured at approximately the same time of day at 4 different times during the field season for both the thermocouples and the CS229 sensors are presented in Figure 4.19 and Figure 4.20 for the shallow and deep covers, respectively. The data has reasonably good correlation with depth considering that the thermocouples are installed at the west side of the covers and the CS229 thermal conductivity sensors are installed near the center of each cover.

Figure 4.21 and Figure 4.22 present the soil temperature data measured using the CS229 thermal conductivity sensors. The trends in the temperature over time for each cover are similar. The profiles indicate that air temperature has a significant impact on the soil near surface, while the effects for deeper soil are attenuated.

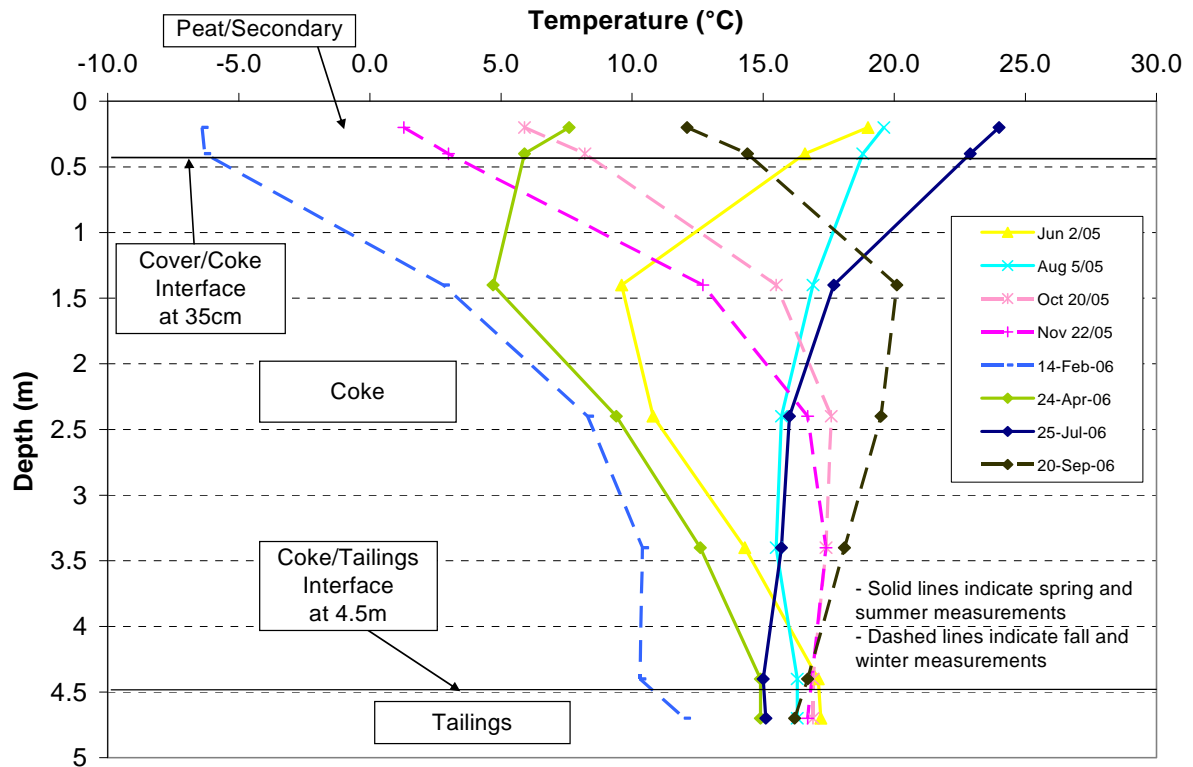


Figure 4.15 Soil temperature profile for GP050402 in the Syncrude coke shallow cover.

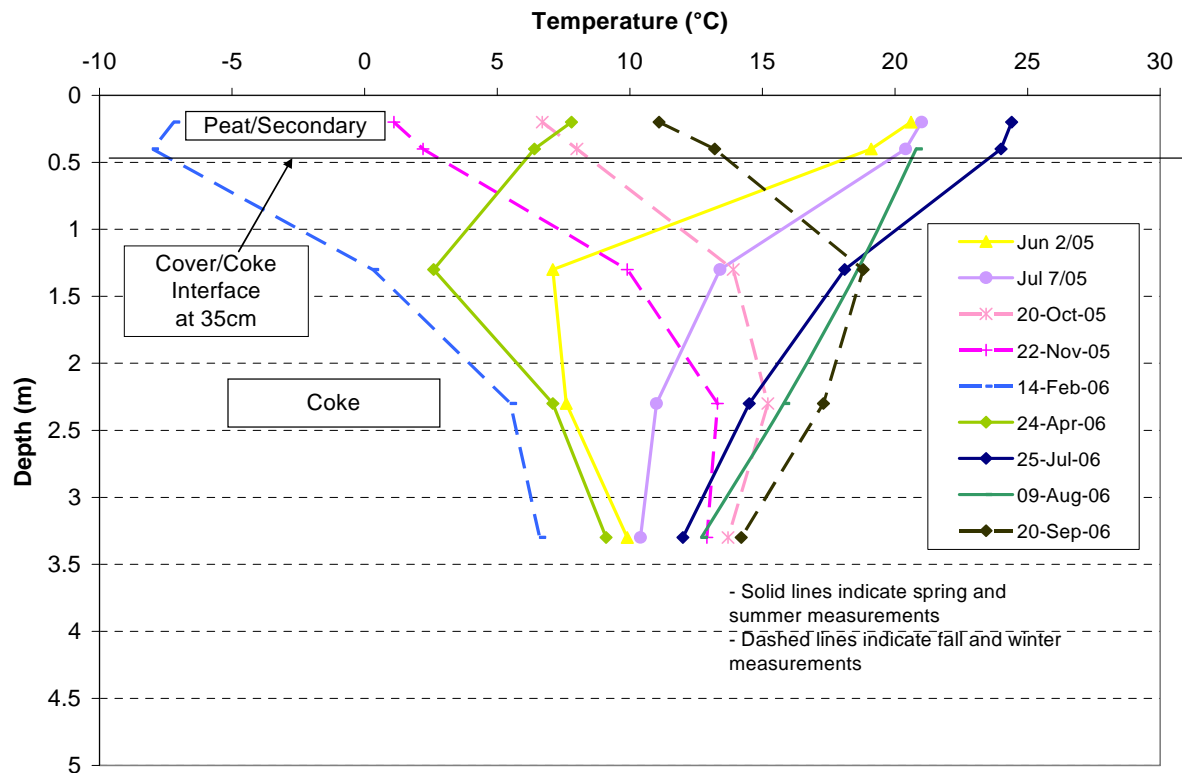
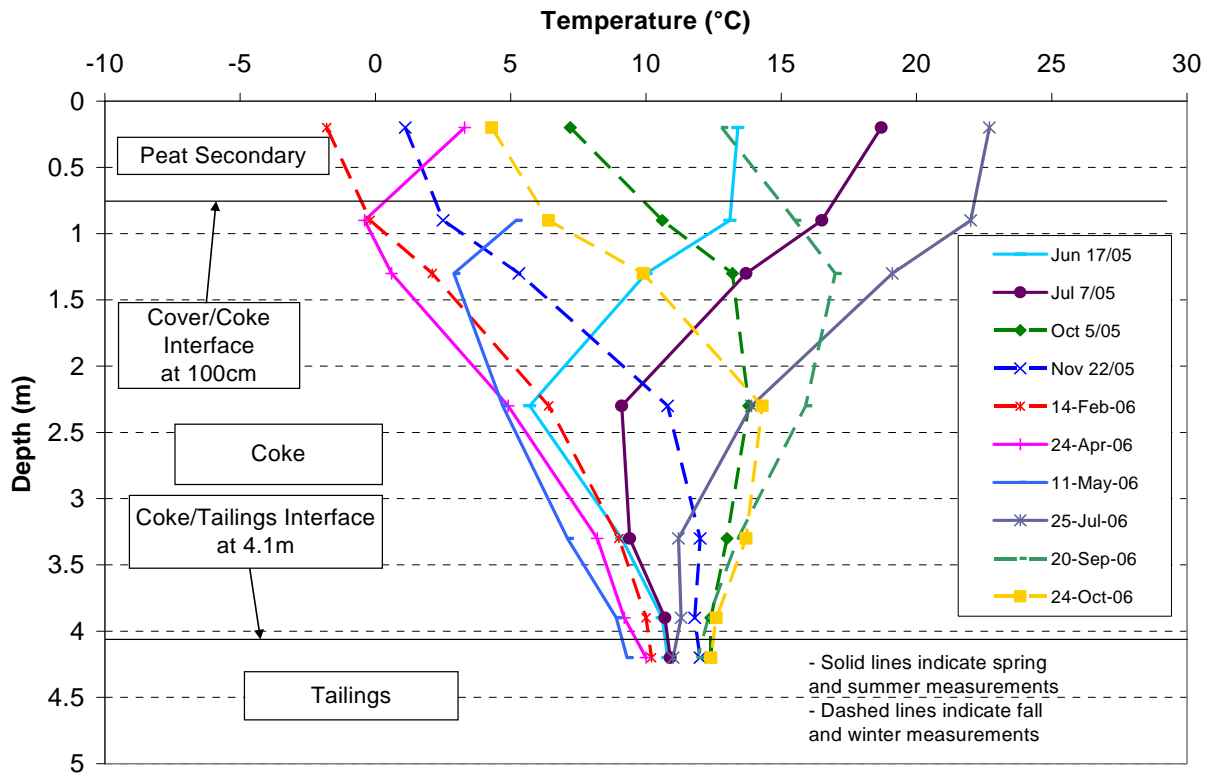
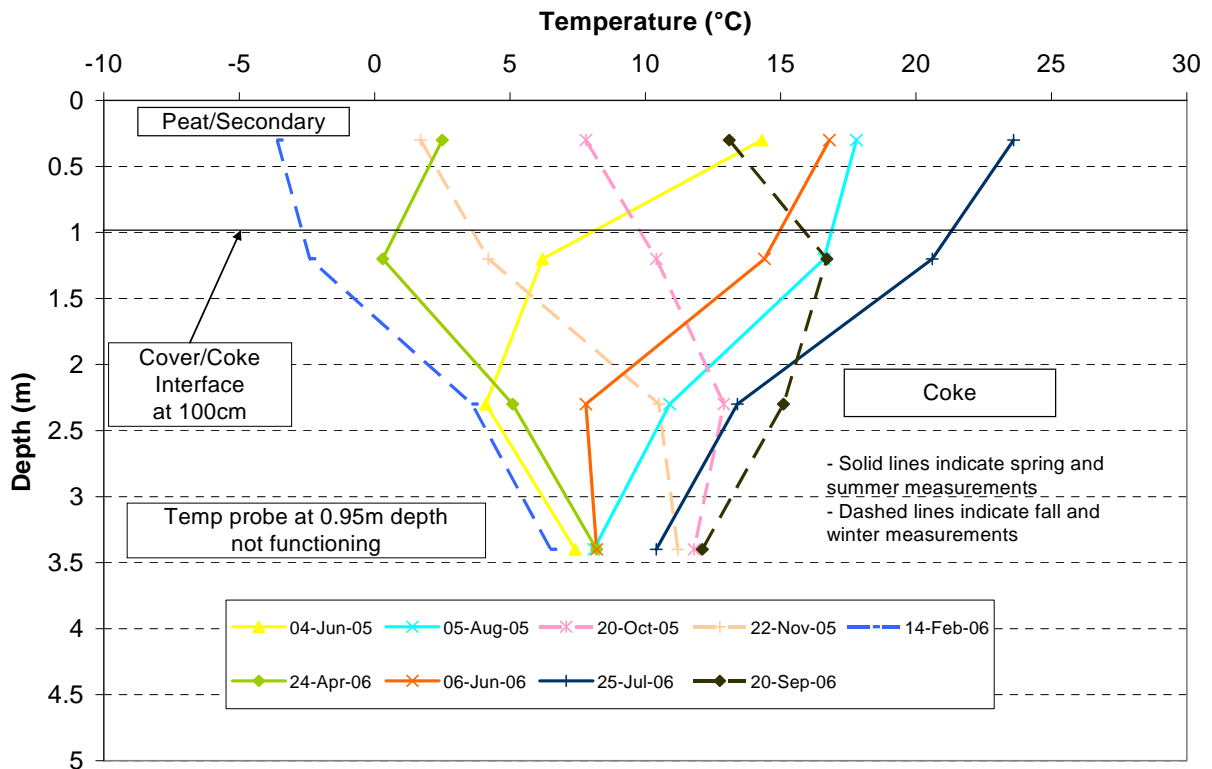


Figure 4.16 Soil temperature profile for GP050401 in the Syncrude coke shallow cover.

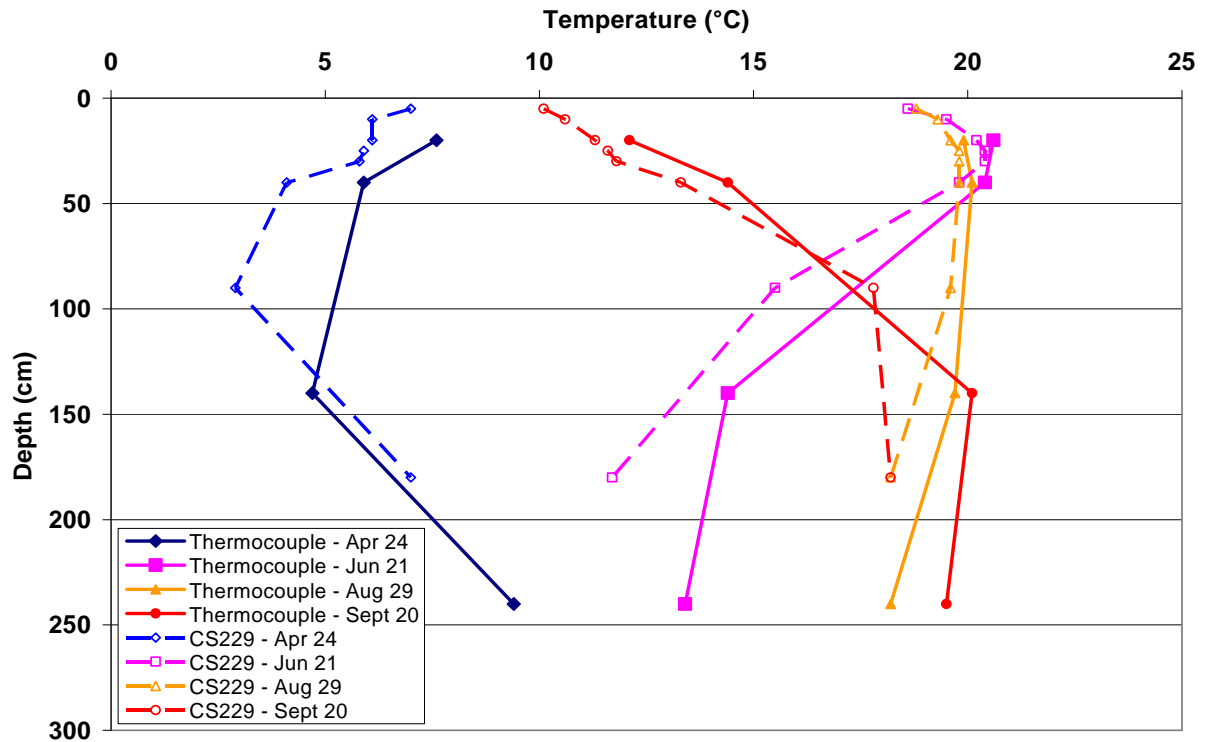




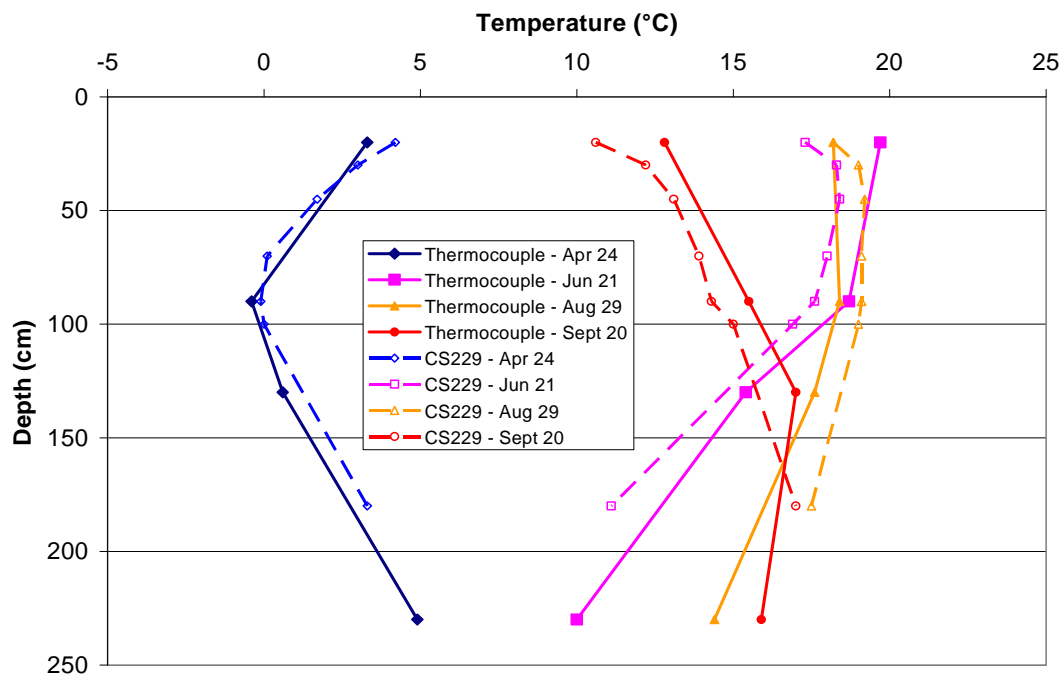
**Figure 4.17** Soil temperature profile for GP050404 in the Syncrude coke deep cover.



**Figure 4.18** Soil temperature profile for GP050403 in the Syncrude coke deep cover.



**Figure 4.19** Temperature profiles for 2006 for the Syncrude coke watershed comparing thermocouple strings and CS229 temperature sensors in the shallow cover.

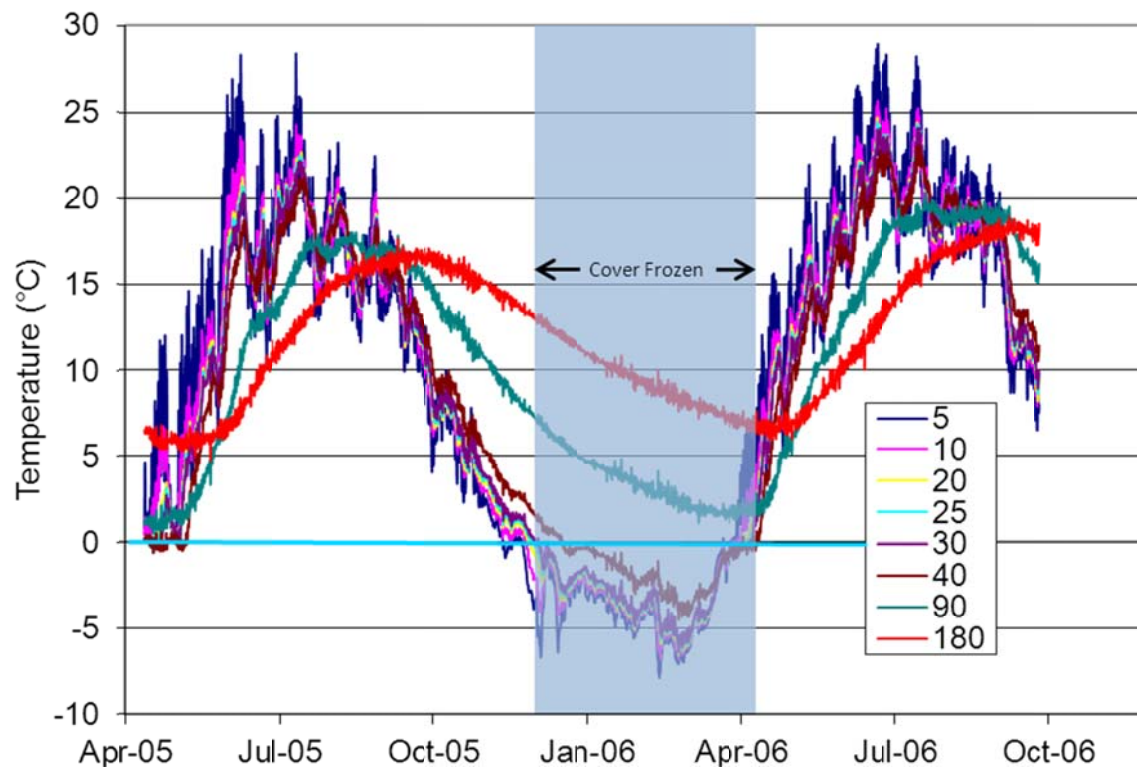


**Figure 4.20** Temperature profiles for 2006 for the Syncrude coke watershed comparing thermocouple strings and CS229 temperature sensors in the deep cover.

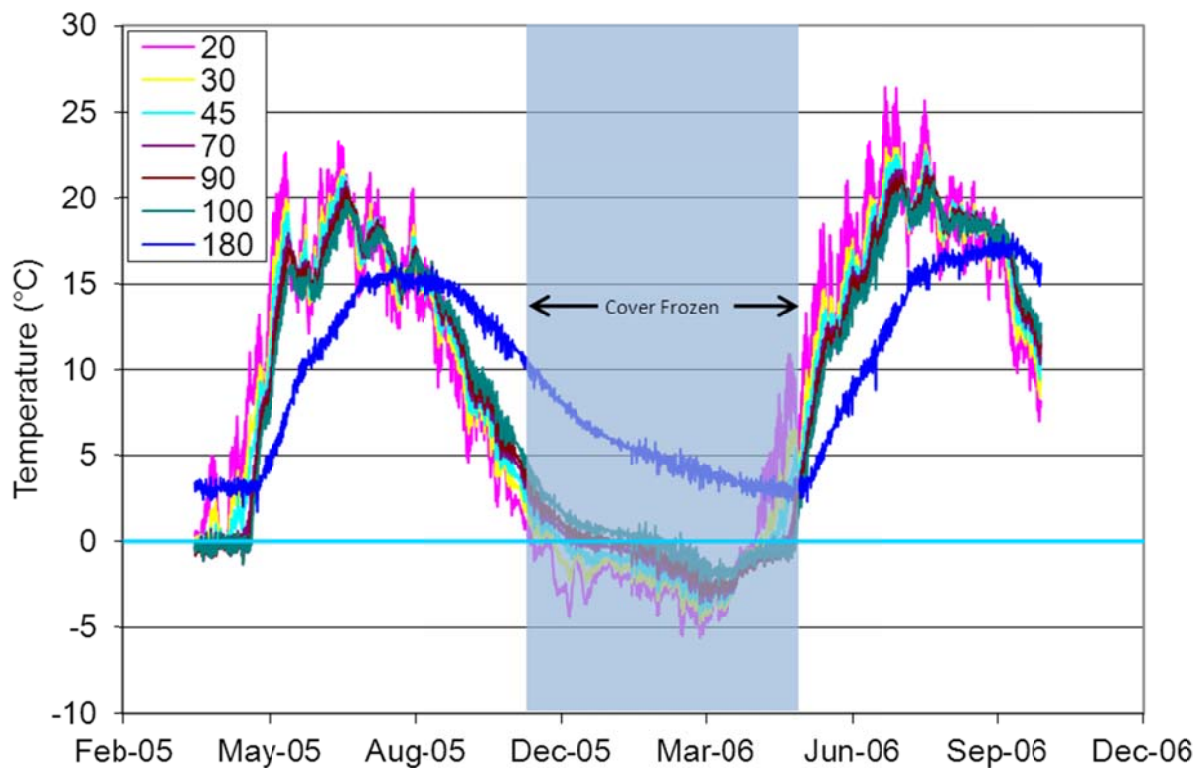
The soil temperature in the shallow cover fell below zero during the winter of 2005/2006 for the CS229 sensors located at depths of 5 cm, 10 cm, 20 cm, 25 cm, 30 cm and 40 cm below grade. The sensors at 90 cm and 180 cm did not fall below zero during the winter. In the deep cover, sensors located at 5 cm, 20 cm, 30 cm, 45 cm, 70 cm, 90 cm and 100 cm below grade all fell below zero during the winter of 2005/2006. The only sensor on the deep cover not to fall below zero was at a depth of 180 cm below grade. The lack of freezing at the 90 cm sensor on the shallow cover highlights the thermal insulation properties of the coke relative to that of clay rich soils.

The box plot, originally developed by Tukey (1977) is a convenient way of graphically depicting groups of numerical data. The data is presented as five-number summaries (see Figure 4.23), namely: the smallest observation (sample minimum); lower quartile (Q1); median (Q2); upper quartile (Q3); and largest observation (sample maximum). A boxplot may also be helpful in identifying which observations could be deemed as outliers. The statistical computer software SPSS (2006) was used to produce the box plots. The soil temperature profile data from the CS229 and the thermocouple sensors is presented using box plots.

Figure 4.23 to Figure 4.26 present box plots of the soil temperature data for both the CS229 sensors and the thermocouples. The box plots give an indication of the range of the data collected for each method for the period from February 14, 2006 to October 4, 2006. The time period was selected using the earliest and latest measurements taken with the thermocouples in order to make a direct comparison between the data collected from the CS229 sensors. Figure 4.23 and Figure 4.24 present the data for the shallow cover and Figure 4.25 and Figure 4.26 present the data for the deep cover. The range of data for both covers for the CS229 and thermocouple data are similar. The median temperature for the shallow cover was approximately 15 °C for the period and the median temperature for the deep cover was also approximately 15 °C for the period.

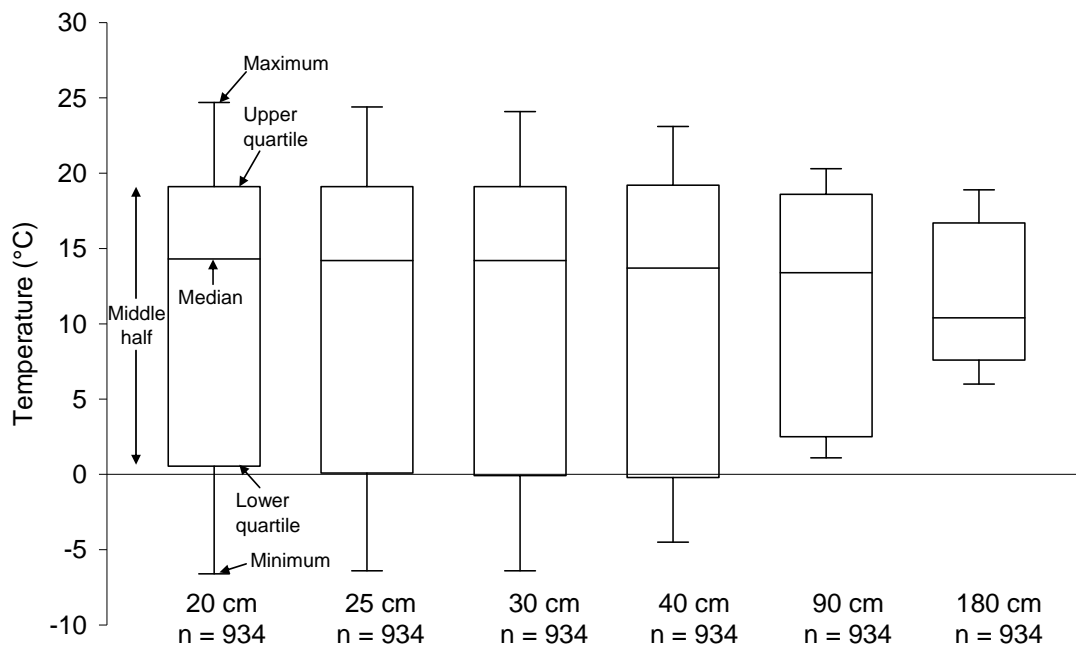


**Figure 4.21** Soil temperatures measured by the CS229 sensors in the Syncrude coke shallow cover.

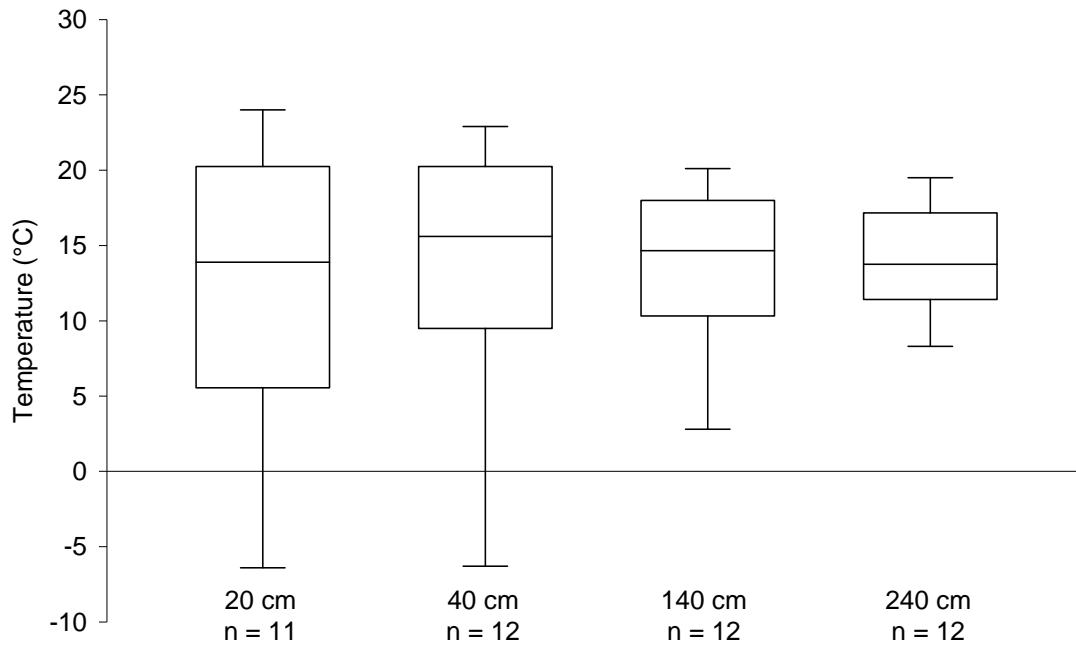


**Figure 4.22** Soil temperatures measured by the CS229 sensors in the Syncrude coke deep cover.

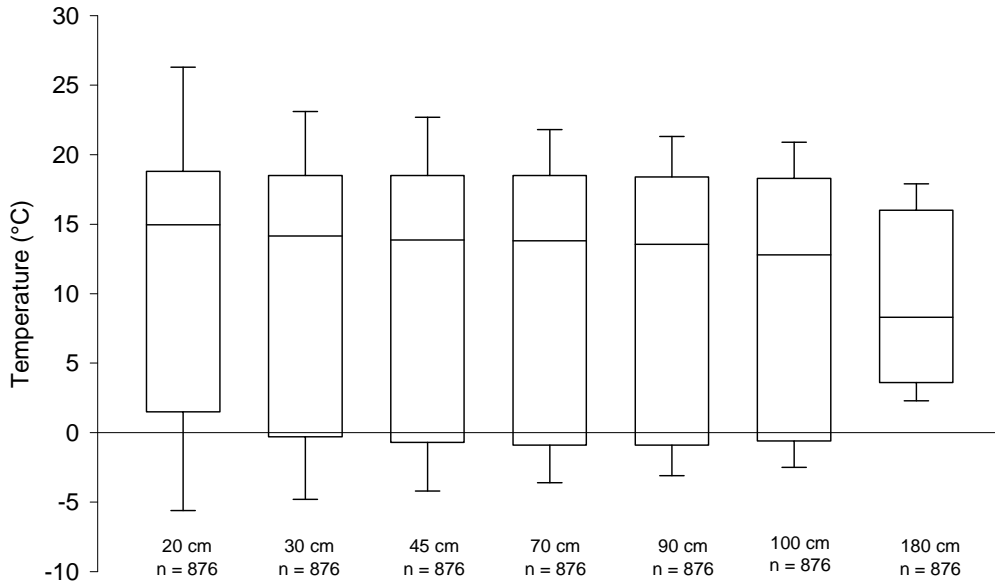
Figure 4.27 presents the mean soil temperature with depth measured by the CS229 sensors for the coke watershed for the period from May 1, 2005 to April 30, 2006 (one complete year of data). On the shallow cover, the mean soil temperature at a depth of 10 cm was 6.2 °C and at 180 cm was 11.3 °C. At a depth of 10 cm and 180 cm on the deep cover, the mean soil temperature for the same period was 5.3 °C and 8.5 °C, respectively. These elevated average temperatures at depth appear to be significantly higher than expected for the region. For comparison, at depths of 5 cm and 170 cm, the 30 Dump D3 Cover had consistent mean soil temperatures for the period from May 1, 2000 to April 30, 2005 (five complete years of data) of 3.9 °C. The deep and shallow coke covers have mean temperatures at 180 cm depth that are 4.6 °C and 7.4 °C higher than the D3 cover at a depth of 170 cm.



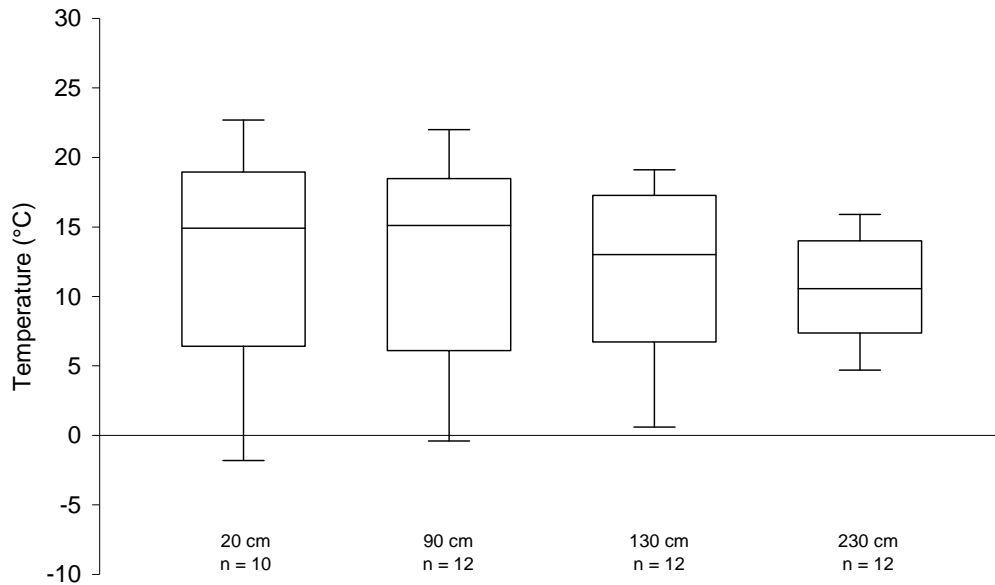
**Figure 4.23 Box plot of temperature versus depth data for CS229 sensors for February 14 to October 4, 2006 on the Syncrude coke watershed shallow cover.**



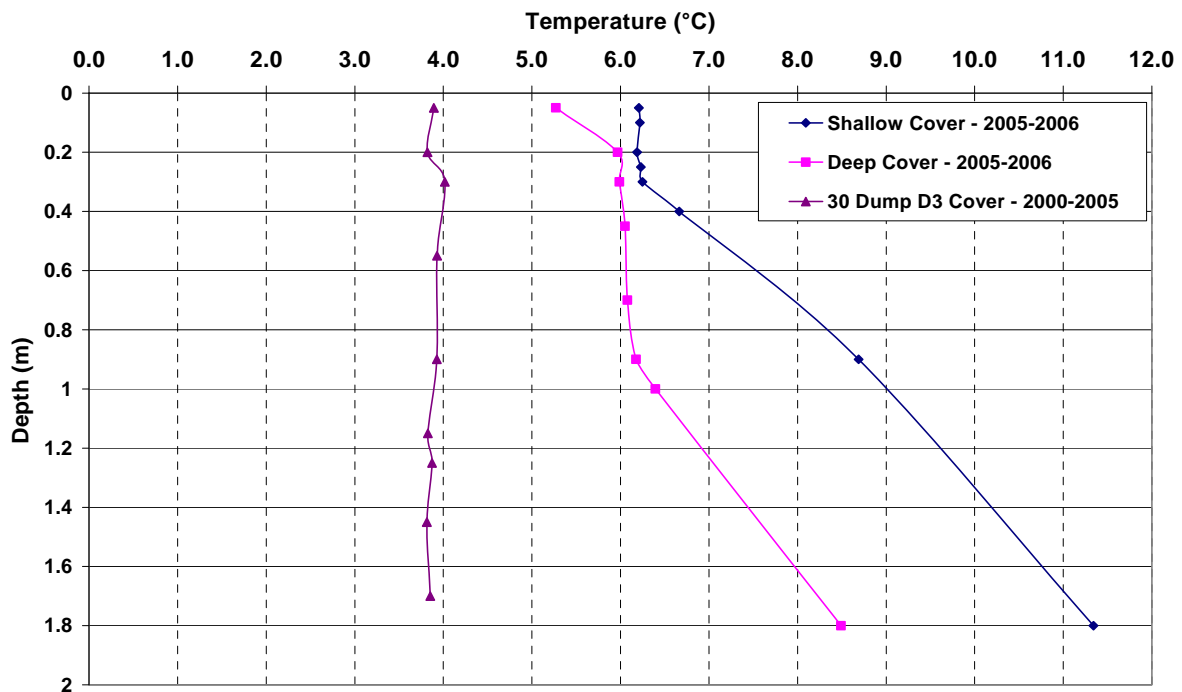
**Figure 4.24** Box plot of temperature data for thermocouple sensors for February 14 to October 4, 2006 on the Syncrude coke watershed shallow cover.



**Figure 4.25** Box plot of temperature versus depth data for CS229 sensors for February 14 to October 4, 2006 on the Syncrude coke watershed deep cover.



**Figure 4.26** Box plot of temperature data for thermocouple sensors for February 14 to October 4, 2006 on the Syncrude coke watershed deep cover.



**Figure 4.27** Average soil temperature profiles measured on the coke watershed compared to the 30 dump D3 Cover.

#### 4.3.9 Groundwater Monitoring

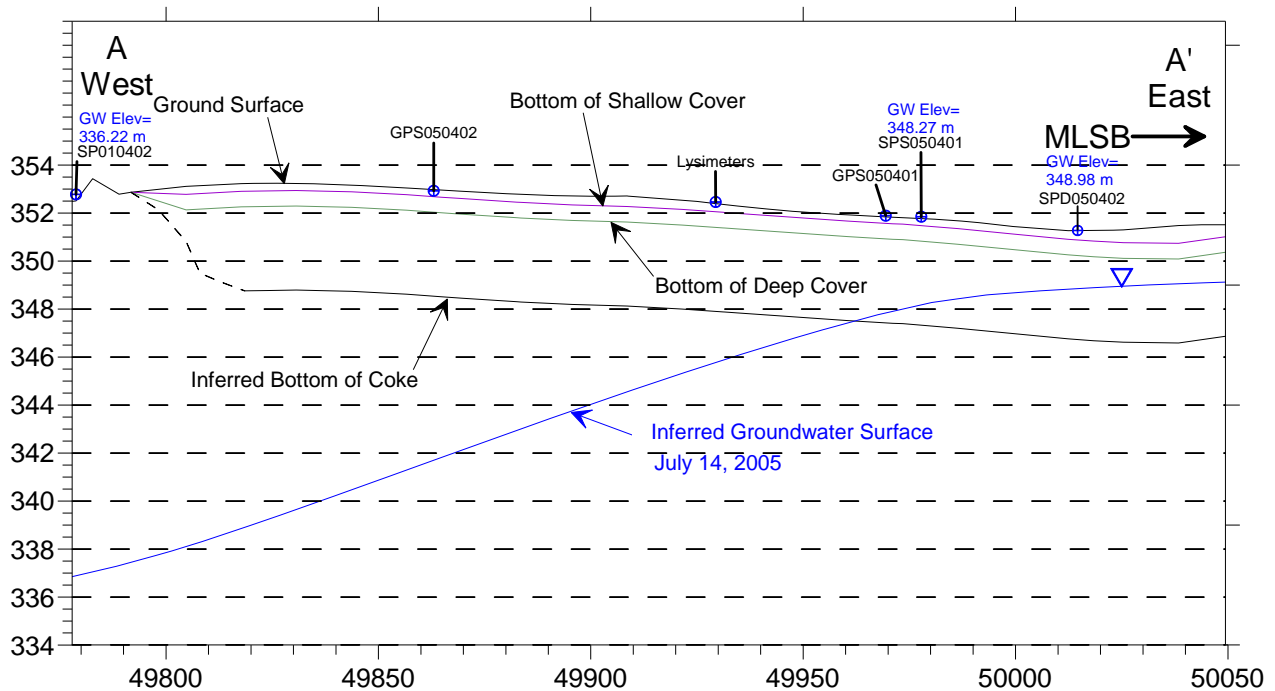
The depth to groundwater (piezometric surface) was measured at each piezometer and the groundwater elevation was calculated to determine the location of the groundwater surface with respect to the coke covers. The groundwater elevations measured at each piezometer generally decreased over the study period from 2005 to 2006. Table 4.6 presents the maximum, minimum and the overall change in groundwater elevation over the study period from June 2005 to October 2006 at each piezometer that was monitored during the study. The groundwater elevation ranged from 348.08 m to 348.45 m in SPS050401 located at the east end of the coke covers and from 335.11 m to 336.37 m in SP010402 located west of the coke covers.

**Table 4.6 Summary of groundwater elevation data at the coke watershed from 2005-2006**

<b>Borehole ID</b>	<b>Maximum GW Elev (m)</b>	<b>Minimum GW Elev. (m)</b>	<b>Change (m)</b>
SPS050401	348.45	348.08	0.37
SPD050403	348.48	348.29	0.19
SPS050404	348.39	348.05	0.34
SPD050405	348.27	347.88	0.39
SP010402^	336.37	335.11	1.26

Figure 4.28 presents a cross section (Section A-A' see Figure 3.4) through the coke covers with the approximate location of the groundwater surface. The groundwater surface sloped downward sharply from east to west due to the presence of the western dyke of the MLSB. At the west of the covers, the groundwater surface ranged from 16.4 m to 17.7 m below the ground surface and at the east end of the covers the groundwater surface ranged from 3.5 m to 3.8 m below the ground surface.





**Figure 4.28 Cross section of the coke cover area showing the approximate groundwater surface relative to the coke covers.**

#### 4.3.10 Soil Water Content

Figure 4.29 to Figure 4.36 summarizes the water profiles measured with the Diviner 2000 capacitance probes for 2005 and 2006. Figure 4.29 depicts the water profile within the shallow lysimeter and Figure 4.30 to Figure 4.32 present the water content profiles at the west end, center and east end of the shallow cover, respectively. The water content profile in the shallow lysimeter (Figure 4.29) shows overall higher water content throughout the profile when compared to the profiles outside the lysimeters. This indicates that the presence of the tank lysimeter may be having an impact on the water profile by creating a “bath-tub effect”, allowing more water to be retained in the cover soils. The average range between the maximum and minimum water contents measured at each depth within the cover soils was  $0.16 \text{ m}^3/\text{m}^3$  at PRO 60. The average difference between the maximum and minimum water contents over the depth of the shallow cover soils at PRO 62, PRO 64 and PRO 66 were  $0.10 \text{ m}^3/\text{m}^3$ ,  $0.08 \text{ m}^3/\text{m}^3$ , and  $0.10 \text{ m}^3/\text{m}^3$ , respectively.

The effect of a textural break in the shallow cover immediately above the secondary-coke interface is apparent in Figure 4.29 (PRO 60), Figure 4.31 (PRO 64) and Figure 4.32 (PRO 66)

where higher water contents were measured. Water contents at this interface, reach a peak higher than  $0.50 \text{ m}^3/\text{m}^3$  in the lysimeter and range from less than  $0.20 \text{ m}^3/\text{m}^3$  to around  $0.30 \text{ m}^3/\text{m}^3$  at the middle and east locations of the shallow cover. The profile at the west end of the cover does not show this prominent increase in water at the base of the cover. This may be due to a combination of factors. More vigorous vegetation growth at the west end of the covers may have created higher levels of AET on the western portion of the cover and a lower groundwater elevation below the cover at the west end (Figure 4.28) may have caused an under-drain effect essentially drying the cover. The moisture content at the base of the shallow cover at PRO 62 was less than  $0.10 \text{ m}^3/\text{m}^3$ .

Figure 4.33 presents the water profile for PRO 61 within the deep lysimeter and Figure 4.34 to Figure 4.36 shows the water profiles at the west end, center and east end of the deep cover, respectively. Similar trends in water profiles as observed on the shallow cover are also observed on the deep cover. Within the deep lysimeter (Figure 4.33), the water contents in the cover soils showed the highest interannual variability of all the Diviners installed in both covers, that is, the difference between the maximum and minimum water contents measured at each 10 cm interval was on average higher than any other location measured; an average range of  $0.26 \text{ m}^3/\text{m}^3$  in the cover soils. The difference between the maximum and minimum water contents over the depth of the cover soils at PRO 63, PRO 65 and PRO 67 were  $0.12 \text{ m}^3/\text{m}^3$ ,  $0.11 \text{ m}^3/\text{m}^3$ , and  $0.17 \text{ m}^3/\text{m}^3$ , respectively. Similar to the water content profiles in the shallow cover, the presence of the tank lysimeter under the deep cover created the “bathtub effect” to an ever greater extent than on the shallow cover. However, the effects of a textural break on the water content at the secondary-coke interface were clearly visible at all three locations outside the lysimeter across the deep cover.

Observations made during field auguring indicated substantial desiccation observed in the secondary layer underlying the peat-mineral mix. It appears that the peat-secondary interface, is also acting as a capillary break, enhancing water storage within the peat-mineral layer and limiting water availability to the lower secondary layer, which may promote desiccation of the secondary layer. This is evident in the sharp spike in water content observed in the peat-mineral layer in all of the diviner water profiles (Figure 4.29 through Figure 4.36).

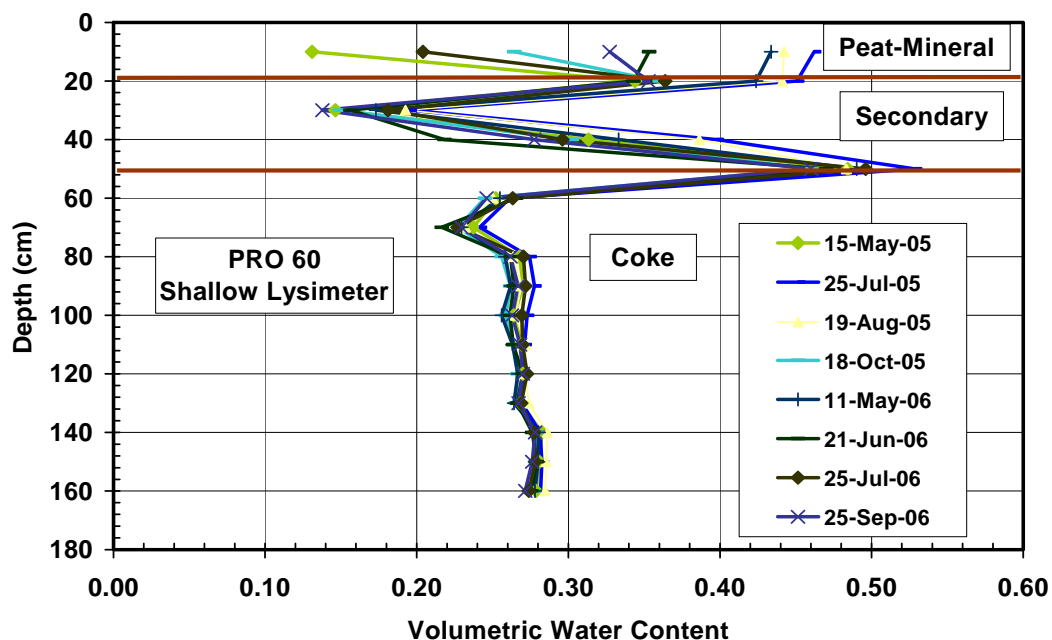


Figure 4.29 Soil water profile for 2005-2006 using the Diviner probe inside the shallow lysimeter.

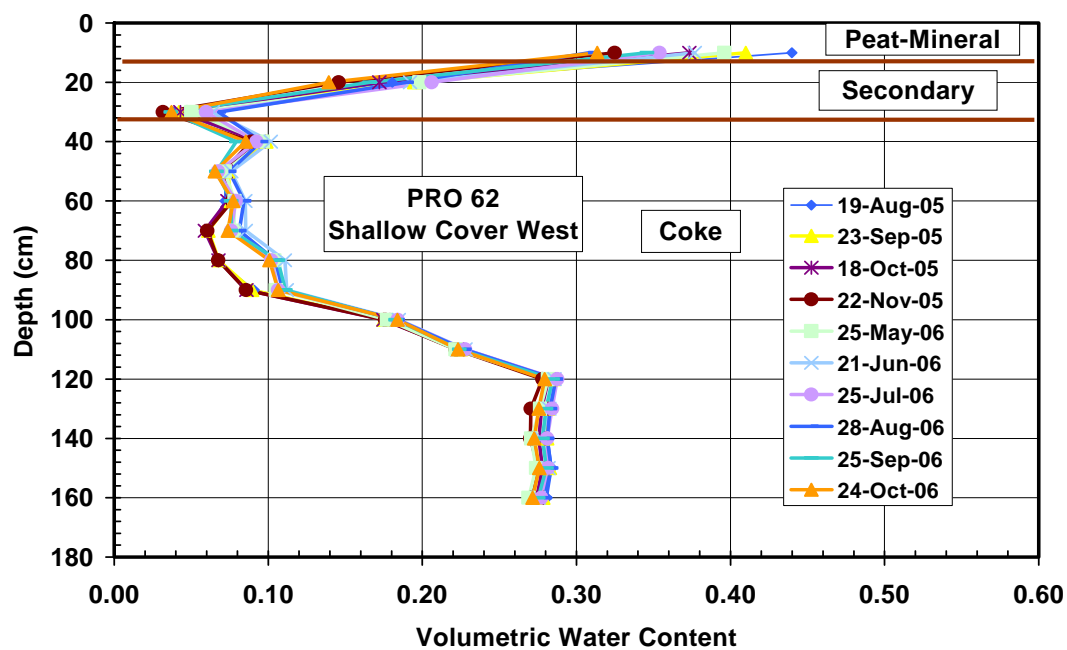


Figure 4.30 Soil water profiles for 2005-2006 for Diviner probes in the shallow cover west end.

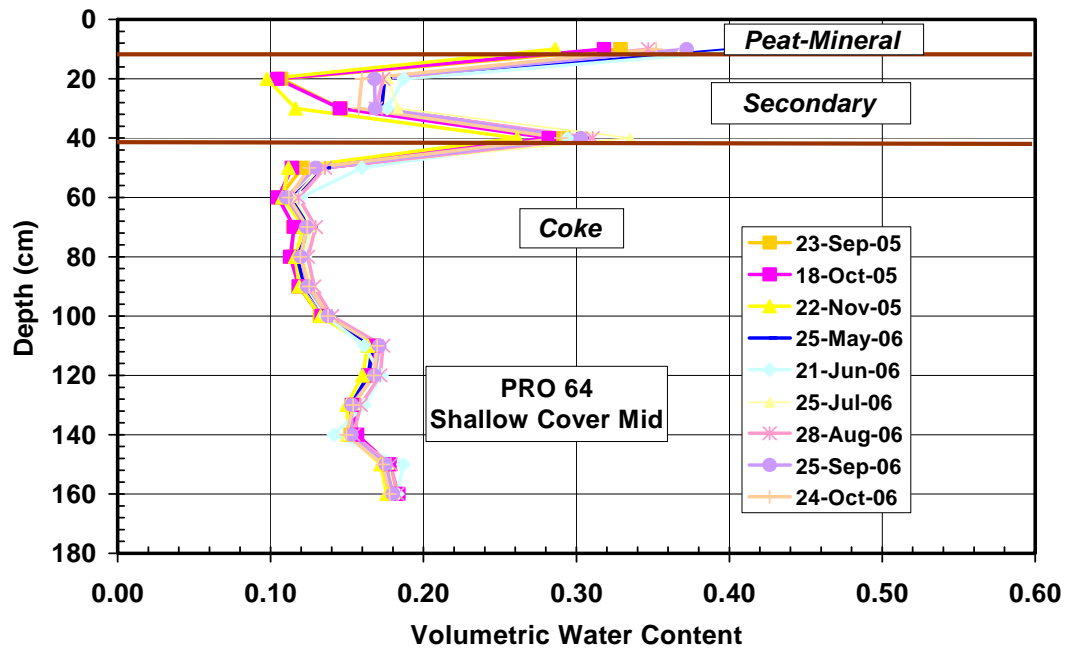


Figure 4.31 Soil water profiles for 2005-2006 for Diviner probes in the shallow cover at mid-cover.

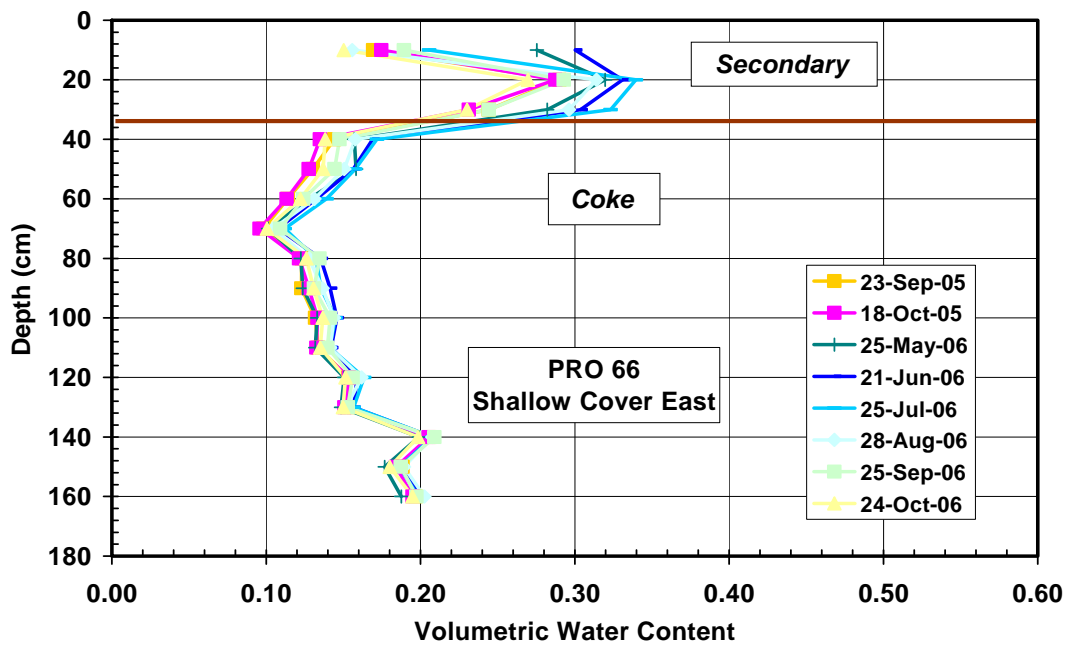


Figure 4.32 Soil water profiles for 2005-2006 for Diviner probes in the shallow cover east end.

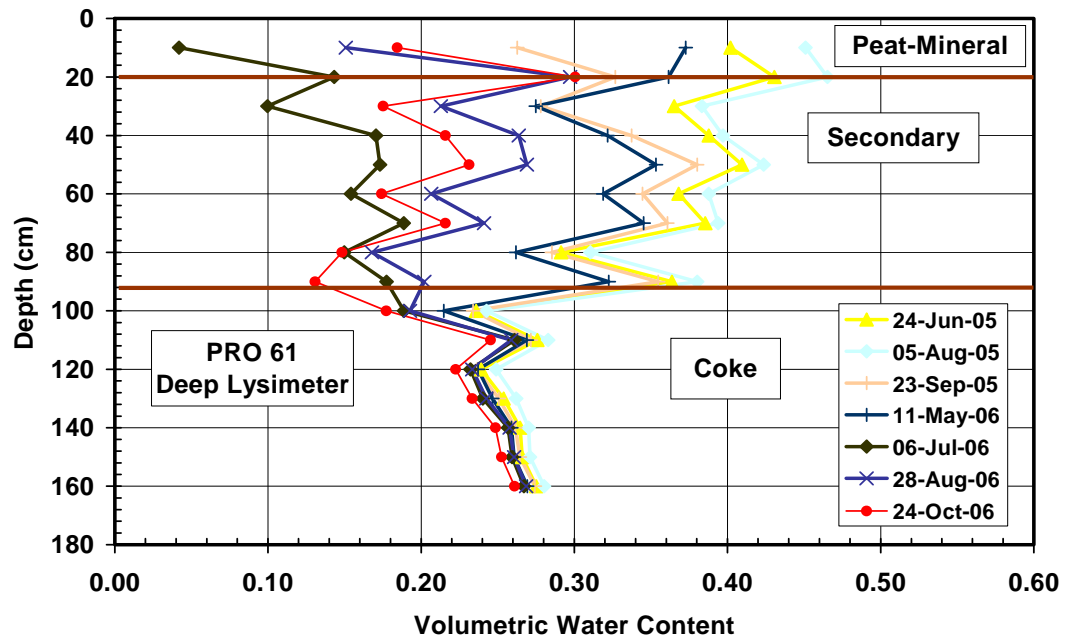


Figure 4.33 Soil water profile for 2005-2006 using the Diviner probe inside the deep lysimeter.

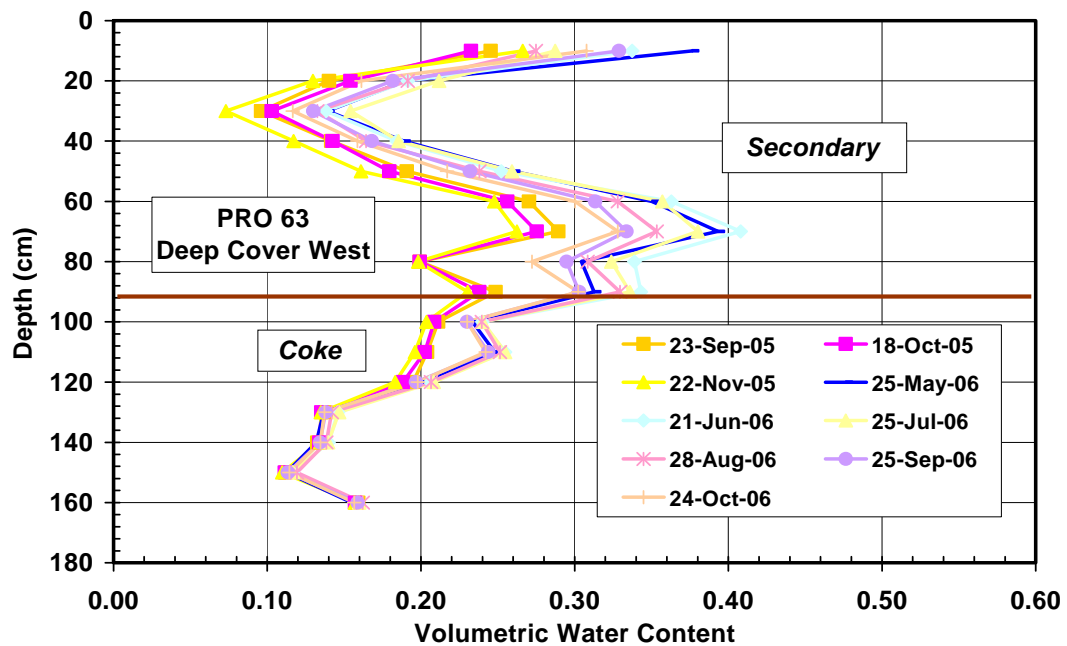


Figure 4.34 Soil water profiles for 2005-2006 for Diviner probes in the shallow cover west end.

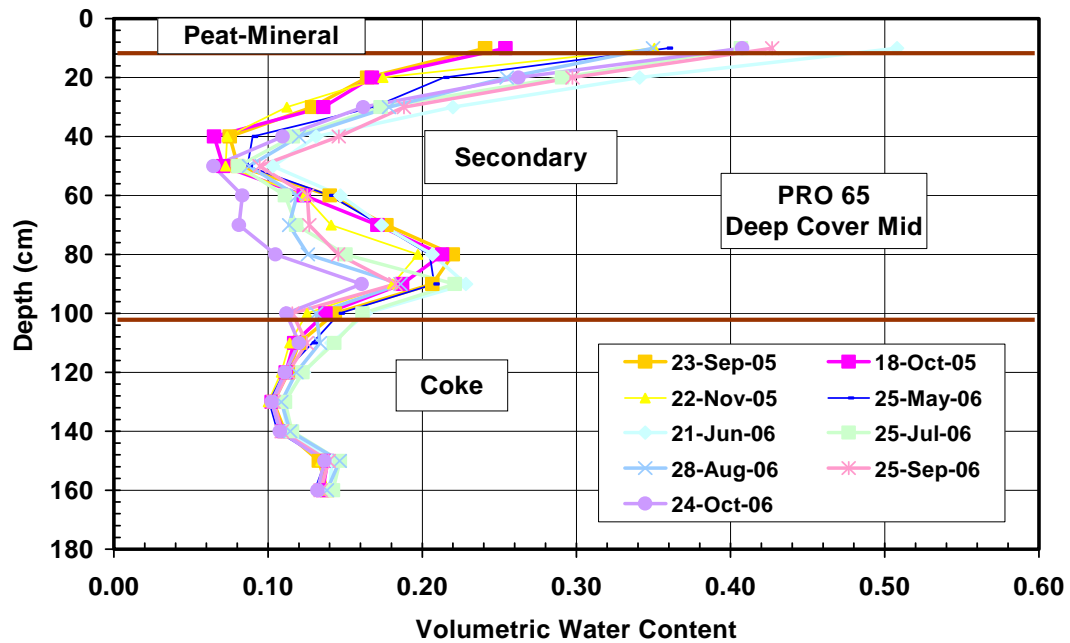


Figure 4.35 Soil water profiles for 2005-2006 for Diviner probes in the shallow cover at mid-cover.

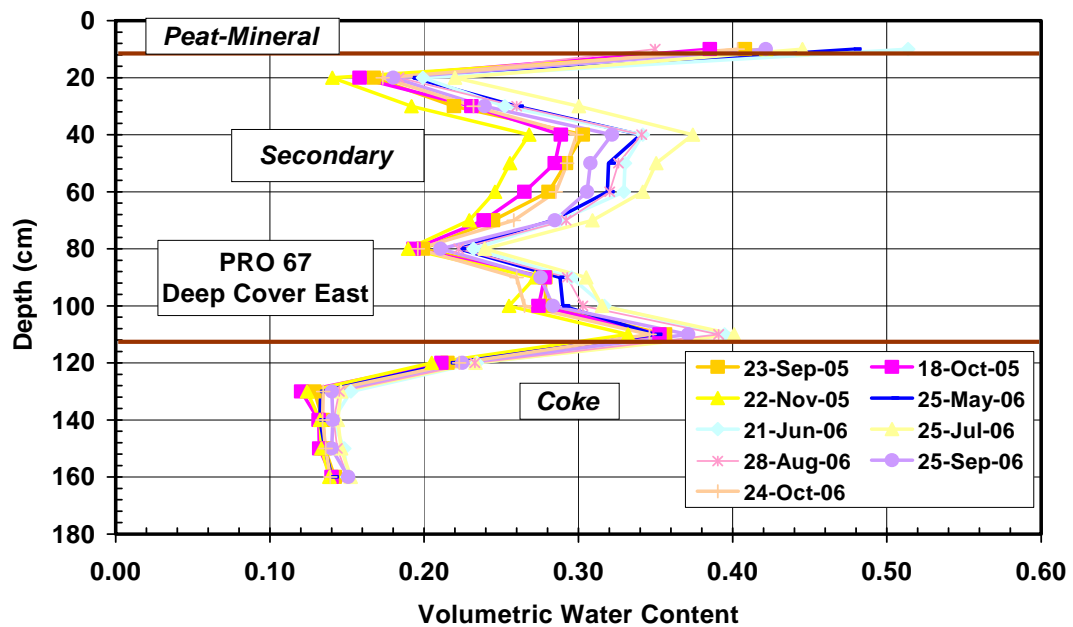
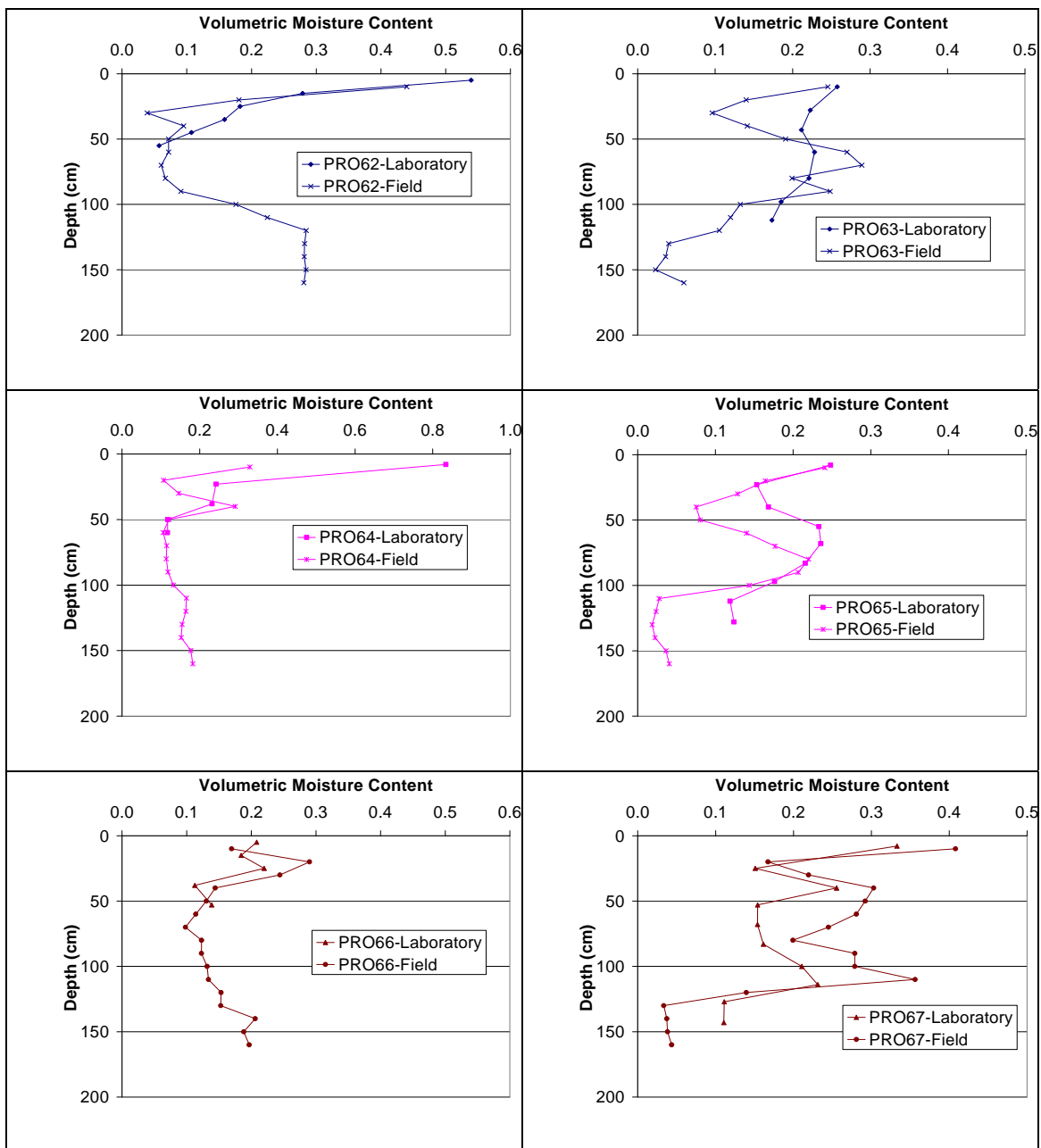


Figure 4.36 Soil water profiles for 2005-2006 for Diviner probes in the shallow cover east end.

Figure 4.37 compares the laboratory and field measured water contents at each of the Diviner access tubes. The laboratory measured water contents represent the soil water conditions at the

time the access tubes were installed and the field measured water contents were those measured by the Diviner immediately after tube installation.



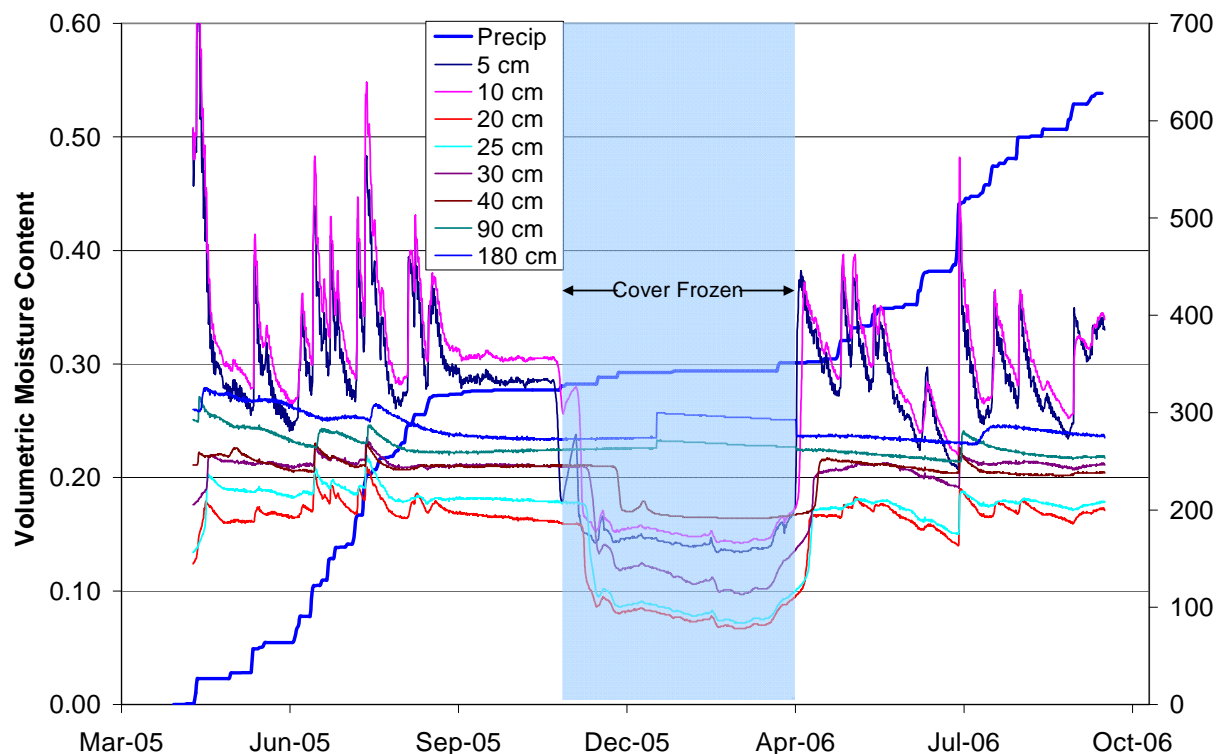
**Figure 4.37 Comparison of laboratory and field measured water contents at Diviner access tube locations.**

The laboratory and field data in Figure 4.37 generally correspond well. However, field data for PRO 63, PRO 64 and PRO 65 at depths within the secondary layer deviate significantly from the laboratory data, with the laboratory results having water contents which are as much as 0.25  $\text{m}^3/\text{m}^3$  higher than those measured in the field. Coefficient of determination ( $r^2$ ) for PRO 62,

PRO 64 and PRO 66 on the shallow cover were 0.90, 0.58 and 0.38, respectively. On the deep cover, PRO 63, PRO 65 and PRO 67 had  $r^2$  values of 0.44, 0.53 and 0.74, respectively.

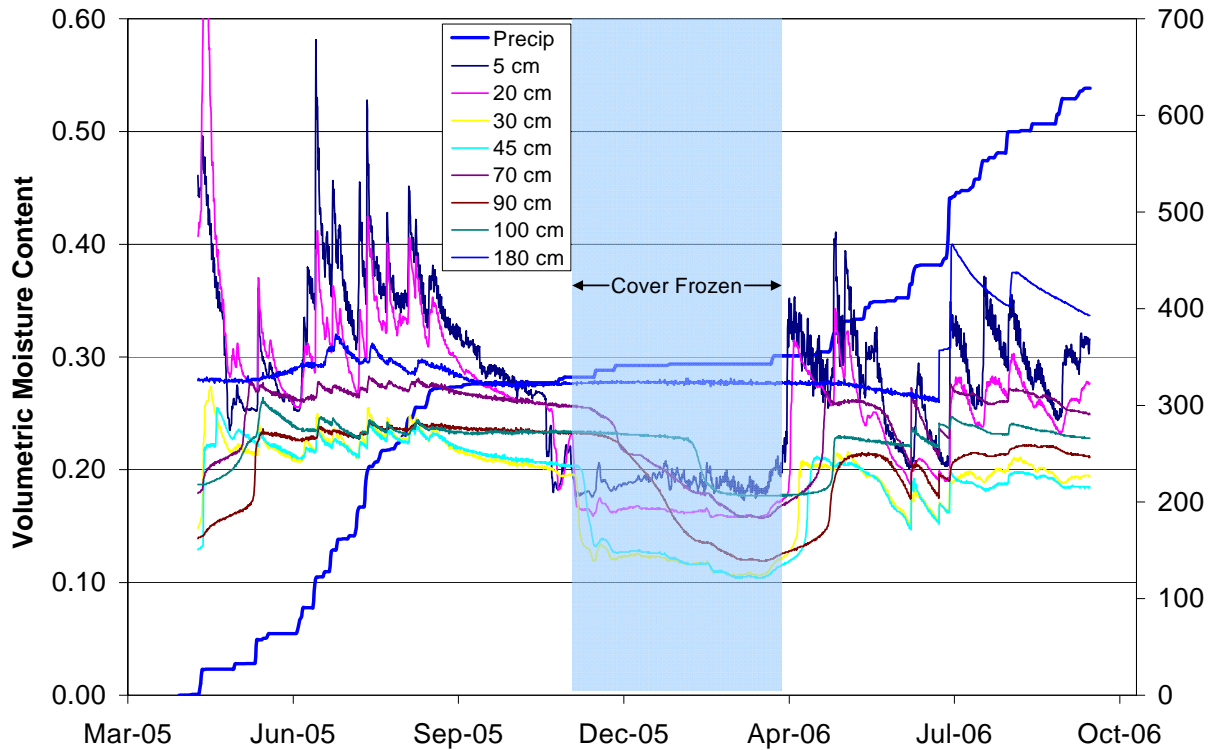
Figure 4.38 and Figure 4.39 present the water content data for the TDR sensors on the shallow and deep covers, respectively. The data are plotted with cumulative precipitation to show the response of each sensor. It is clear that the near-surface sensors installed in the peat-mineral layer have a dramatic, almost immediate, response to precipitation events with water contents increasing by as much as 25% immediately after precipitation. The sensors installed in the secondary have a subdued response due to storage within the peat-mineral layer and the lower hydraulic conductivity delaying infiltration. The greatest responses to rainfall occurred in the spring when vegetation demands were lowest and responses were generally less in the summer months when soil water was reduced due to warmer temperatures and increased plant growth.

Moisture contents measured during the winter are considered unreliable due to freezing of the soil around the TDR sensors.



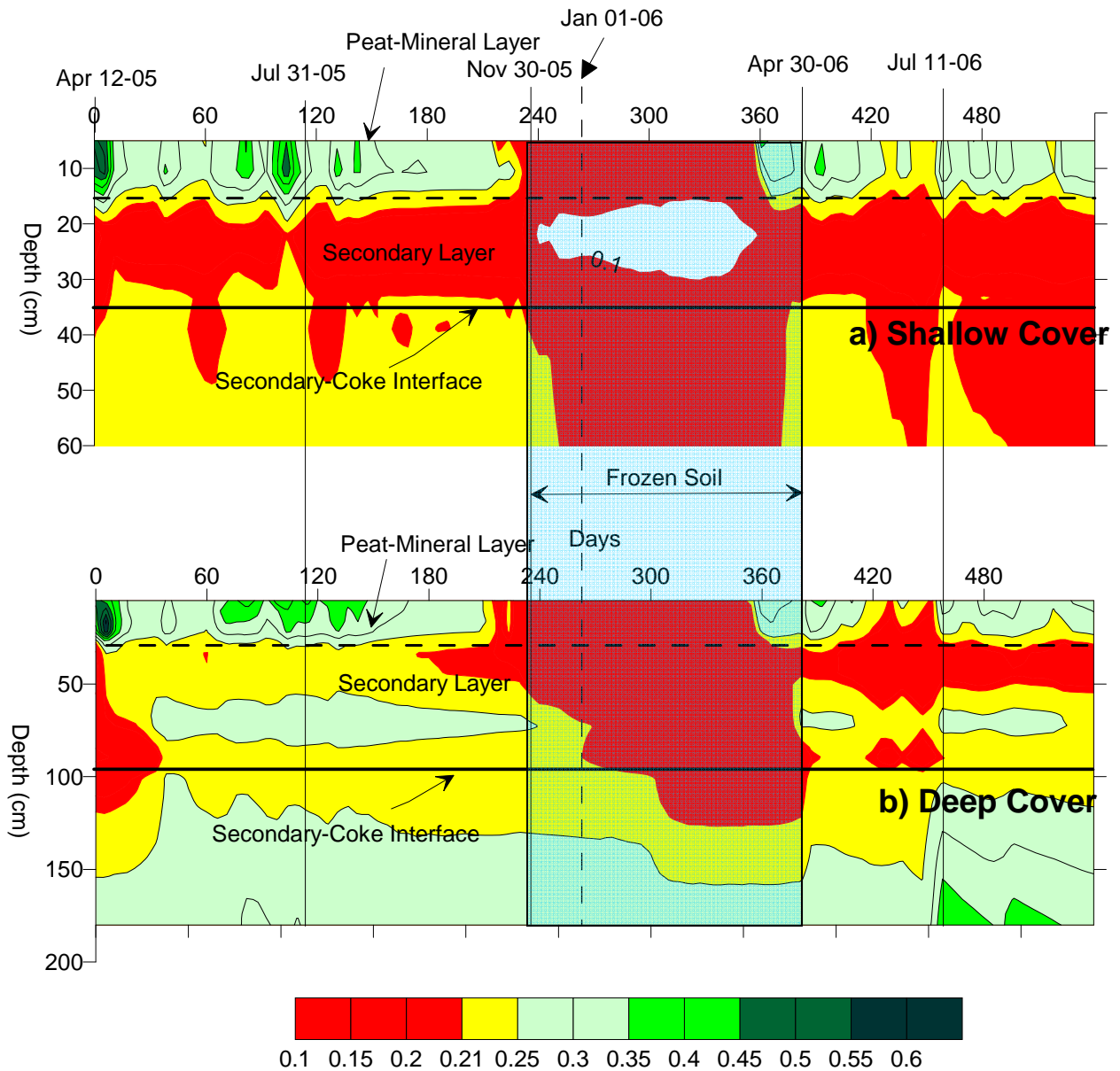
**Figure 4.38 CS616 sensor response to precipitation in shallow cover.**





**Figure 4.39 CS616 sensor response to precipitation in deep cover.**

Figure 4.40a and Figure 4.40b present changes in the volumetric water content measured with the TDR sensors for 2005 and 2006 for the shallow and deep covers, respectively. The red areas indicate periods of lower water contents (less than  $0.21 \text{ m}^3/\text{m}^3$ ) and green areas indicate periods of higher water contents (higher than  $0.25 \text{ m}^3/\text{m}^3$ ). The yellow areas denote intermediate water contents. Both figures indicate that water contents in the secondary layers are low. The secondary layer in the shallow cover remains at water contents below  $0.21 \text{ m}^3/\text{m}^3$  for nearly the entire growing seasons for both 2005 and 2006. The secondary layer in the deep cover exhibits water contents above  $0.21 \text{ m}^3/\text{m}^3$  but less than  $0.25 \text{ m}^3/\text{m}^3$  for 2005, however, upper portions appear much dryer during 2006 falling below  $0.21 \text{ m}^3/\text{m}^3$ . Only the peat-mineral layers reach peak water contents above  $0.35 \text{ m}^3/\text{m}^3$ , and only during short periods of time after spring melt or following significant rainfall events.



**Figure 4.40** Plot of the volumetric water content profile measured with CS616 sensors for 2005-2006 for the Syncrude coke watershed a) shallow cover and b) deep cover.

Figure 4.41 and Figure 4.42 allow the water contents measured with the TDR sensors and the Diviner probes located at mid-cover to be compared at different times during the field season. The TDR and Diviner data correlate reasonably well for the secondary and peat-mineral layers, however, the water contents measured by the TDR and Diviners show relatively large differences within the coke and compare poorly. The TDR measurements were consistently higher than the Diviner measurements. This difference is likely due to the texture of the coke relative to the cover materials. The installation of the Diviner probes requires that there be intimate contact

with the soil along the entire length of the access tube. The sand-like texture of the hydraulically-placed coke made it loose and susceptible to sloughing during installation of the Diviners. Inadequate soil contact would result in lower Diviner water content readings.

Figure 4.43 to Figure 4.46 illustrate box plots of the TDR sensor and Diviner data. The box plots show the variations of water content at each depth with respect to the median value. The median value of water content measured with the TDR sensors in the peat-mineral layer on the shallow cover was approximately  $0.27 \text{ m}^3/\text{m}^3$  with a maximum near  $0.50 \text{ m}^3/\text{m}^3$  and a minimum around 0.12 (Figure 4.43). When measured with the Diviner probe, the median value is approximately  $0.35 \text{ m}^3/\text{m}^3$  with a maximum of  $0.42 \text{ m}^3/\text{m}^3$  and a minimum of  $0.18 \text{ m}^3/\text{m}^3$  (Figure 4.44). These values compare to field capacity and wilting point water contents in the secondary material of  $0.35 \text{ m}^3/\text{m}^3$  and  $0.21 \text{ m}^3/\text{m}^3$ , respectively. In the shallow cover below the peat-mineral layer, the trend of increasing water content with depth for each cover is similar. The exception is the Diviner readings at 40 cm which show an increase in water content corresponding to the enhanced water storage above the secondary-coke interface.

The median value of water content in the peat-mineral layer of the deep cover measured using TDR sensors is  $0.25 \text{ m}^3/\text{m}^3$  with a maximum of  $0.42 \text{ m}^3/\text{m}^3$  and a minimum of  $0.18 \text{ m}^3/\text{m}^3$  (Figure 4.45). When measured with the Diviner, the median, minimum and maximum values are  $0.35 \text{ m}^3/\text{m}^3$ ,  $0.51 \text{ m}^3/\text{m}^3$  and  $0.24 \text{ m}^3/\text{m}^3$ , respectively (Figure 4.46). Below the peat-mineral layer, the trend observed in the secondary and coke layers are similar for the TDR sensor and Diviner data. Both methods showed a marked increase in water content near the secondary-coke interface.

#### **4.3.11 Soil Matric Suction**

Matric suction was measured using CS229 thermal conductivity sensors. Figure 4.47 and Figure 4.48 present the matric suction data collected during the field season of 2005 and 2006 for the shallow and deep lysimeters, respectively. Data collected during the winter months, when soil is frozen are considered to be unreliable and have not been included in the following analysis.

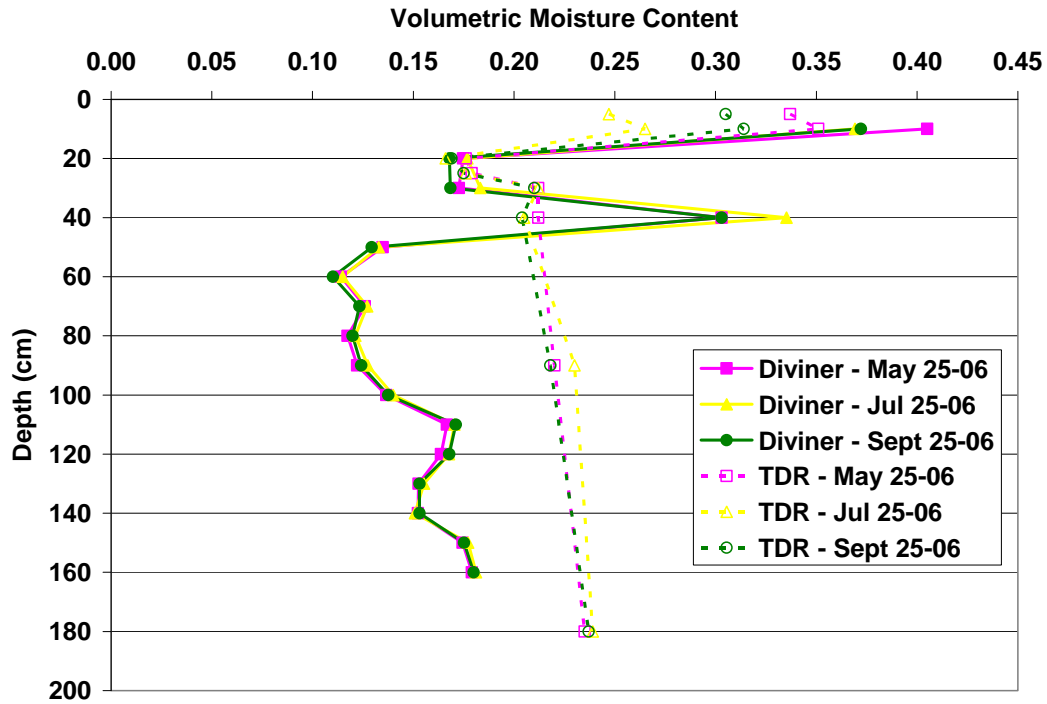


Figure 4.41 Comparison of volumetric water content using a Diviner probe and TDR probes on the shallow cover.

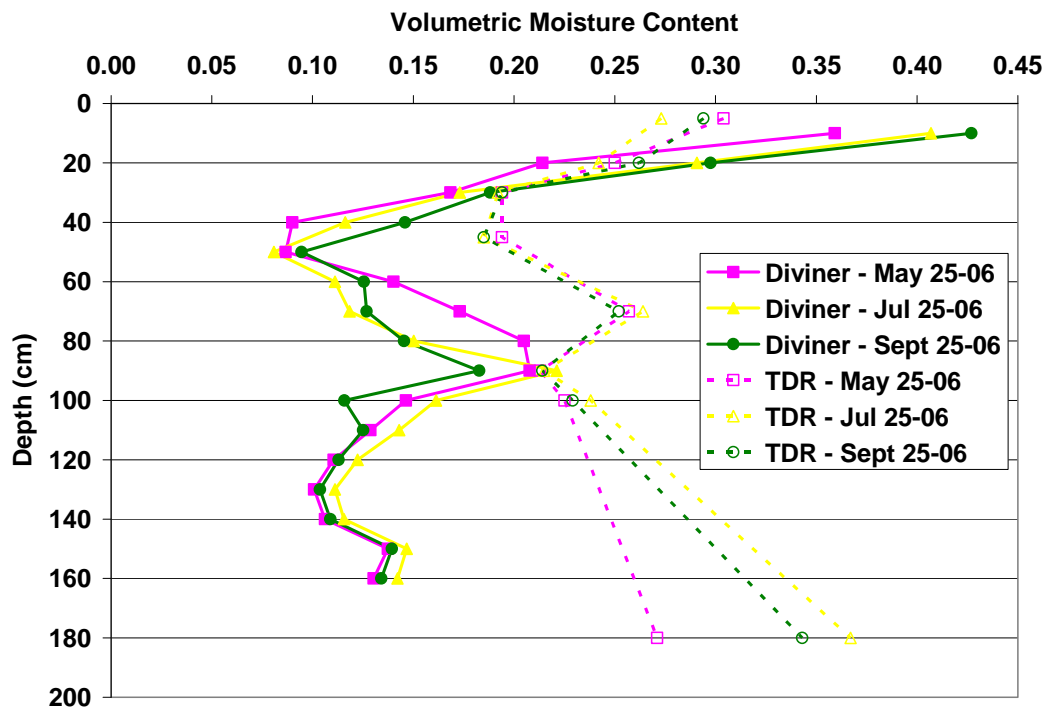
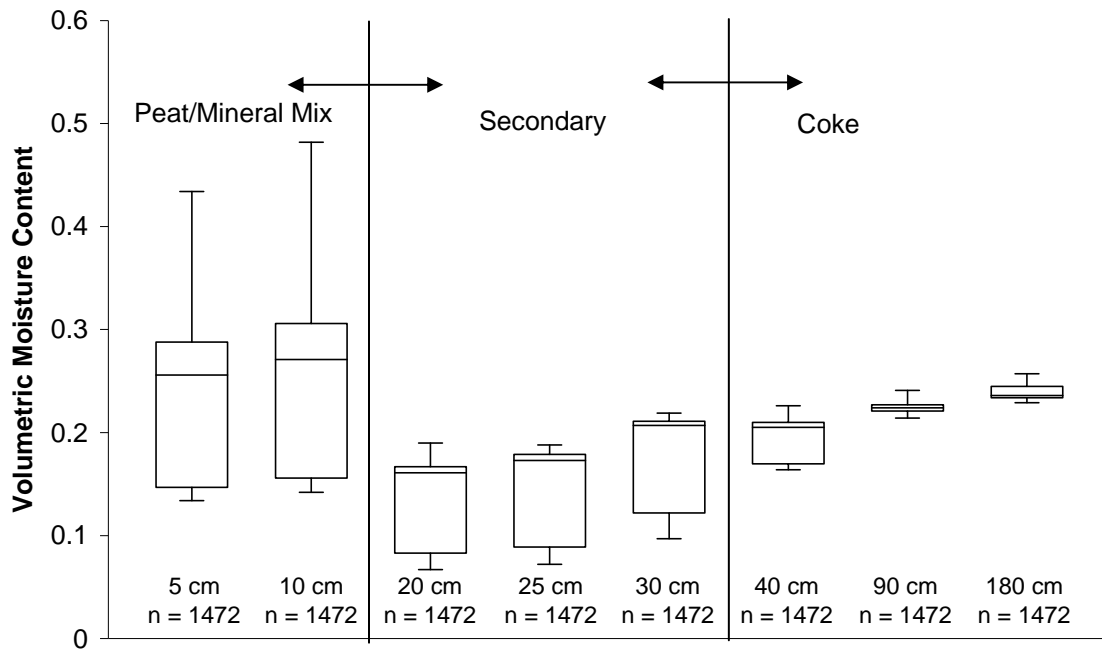
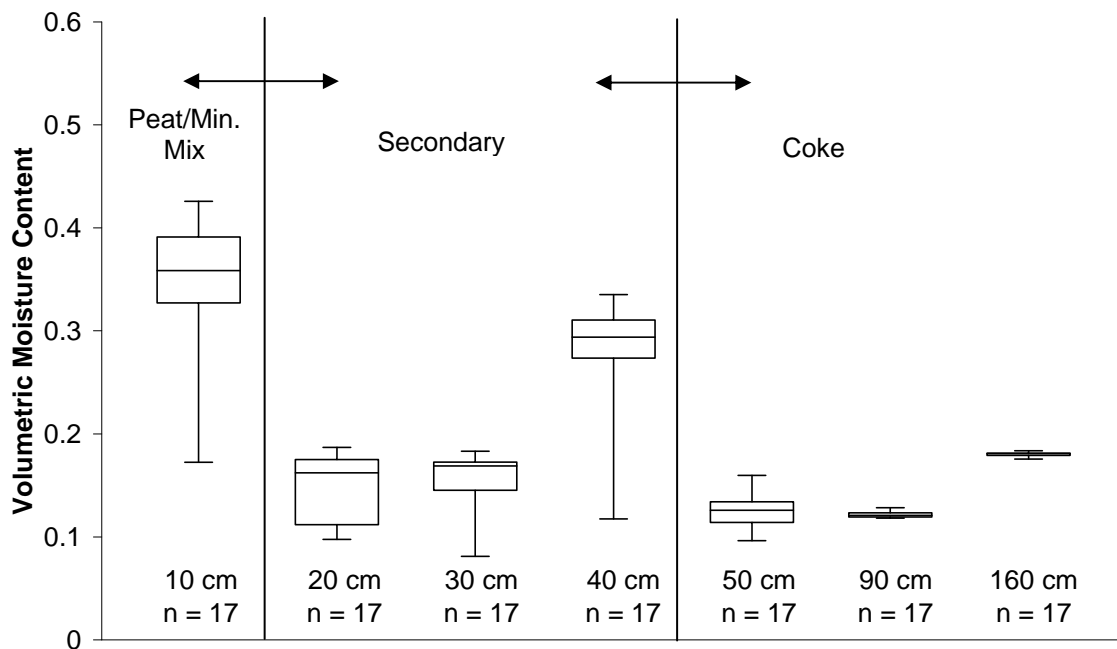


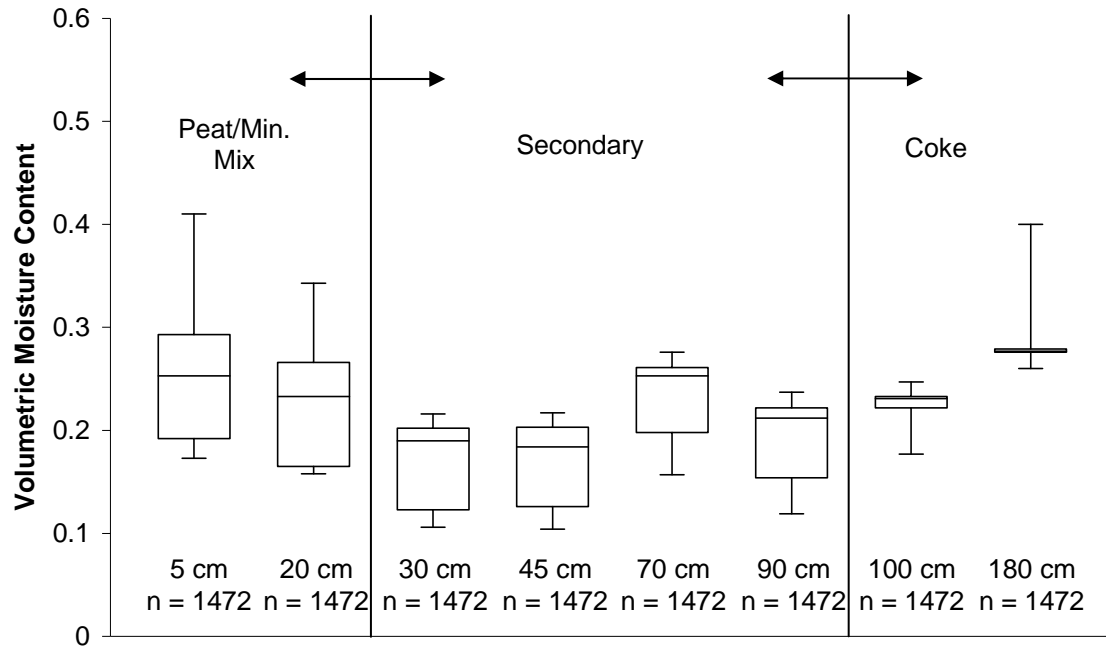
Figure 4.42 Comparison of volumetric water content using a Diviner probe and TDR probes on the deep cover.



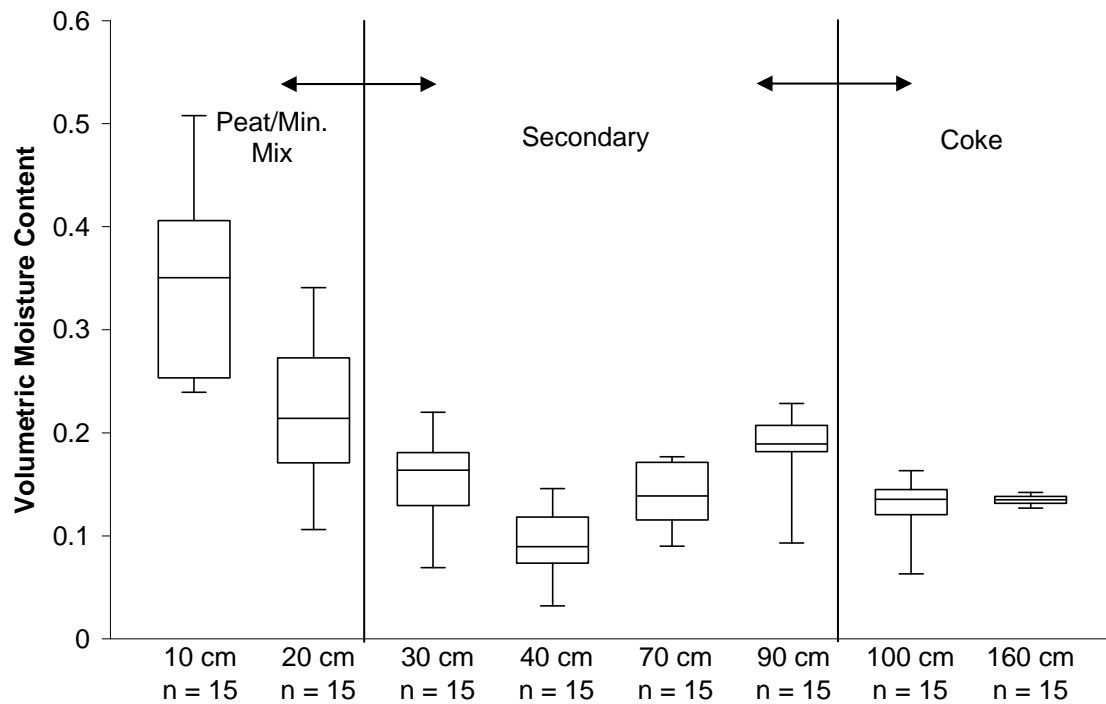
**Figure 4.43** Box plots of volumetric water content for the shallow cover using TDR sensors for the period September 23, 2005 to September 25, 2006.



**Figure 4.44** Box plots of volumetric water content for the shallow cover using a Diviner probe for the period September 23, 2005 to September 25, 2006.



**Figure 4.45** Box plots of volumetric water content for the deep cover using TDR sensors for the period September 23, 2005 to September 25, 2006.



**Figure 4.46** Box plots of volumetric water content for the deep cover using a Diviner probe for the period September 23, 2005 to September 25, 2006.

The data in Figure 4.47 and Figure 4.48 illustrate that the matric suction values tend to be highest during periods of little to no precipitation and conversely, periods of precipitation would result in lower matric suction. In 2005, precipitation events were mostly concentrated in July and August with little rainfall in the late summer when measured suctions generally ranged from less than 10 kPa to 50 kPa in the shallow cover (Figure 4.47) and from less than 5 kPa to 75 kPa in the deep cover (Figure 4.48). Less rainfall resulted in higher matric suction in September and into October 2005 when measured suctions in the shallow cover ranged from approximately 25 kPa to over 100 kPa and in the deep cover ranged from approximately 20 kPa to 100 kPa. Less precipitation fell during the months of June, July and August of 2006 (182 mm) compared to 2005 (250 mm) creating drier soil conditions, allowing for increases in matric suction due to decreased water content and increased plant growth (assuming transpiration was near zero at the start of the summer of 2005 prior to vegetation becoming established, this is discussed in further detail in Section 5.3.1.2). Significantly higher matric suction values were observed in the deep cover compared to the shallow cover.

Figure 4.49 and Figure 4.50 present a comparison of matric suction values for the shallow and deep covers, respectively, measured with the CS229 thermal conductivity sensors and the Soil Moisture QuickDraw Tensiometer on September 20, 2006. The matric suction data shown in Figure 4.49 are similar in the cover, but are not similar in the coke.

The matric suction data for the Quickdraw tensiometer in Figure 4.50 does not match well with the data from the suction sensors. Rain on September 20, 2006, the day the QuickDraw tensiometer measurements were made, may have had an impact on the results.

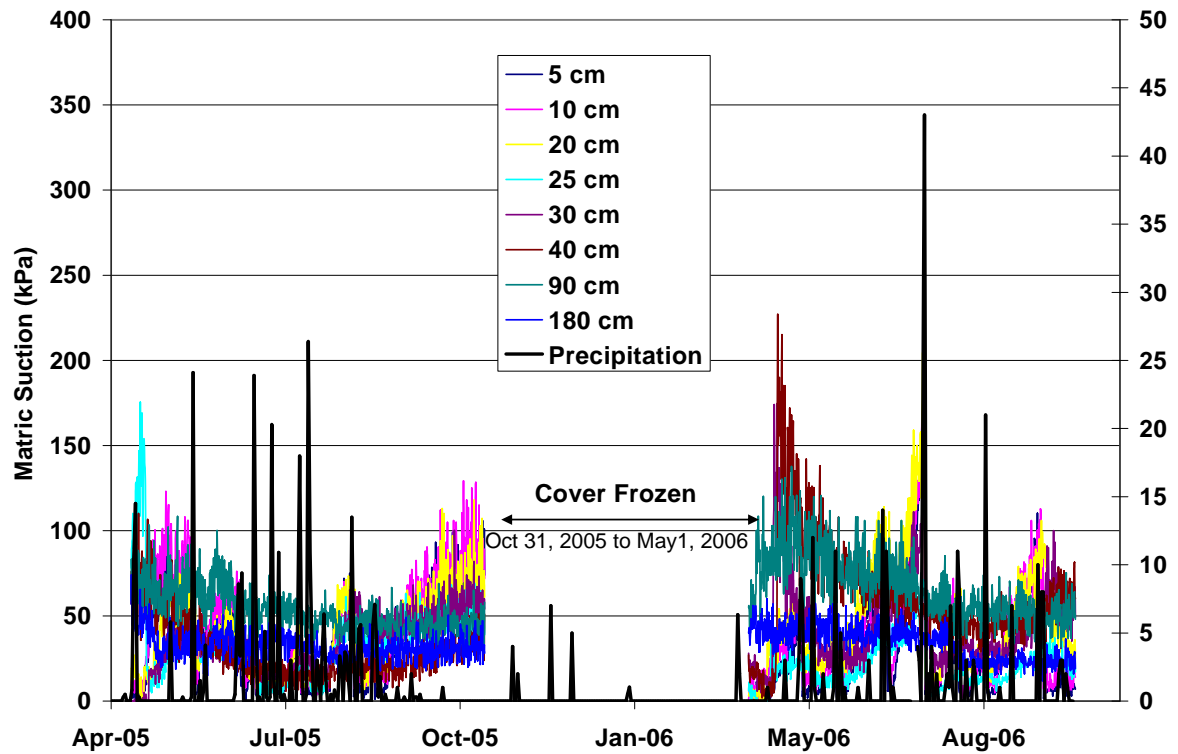


Figure 4.47 229 suction sensor response to precipitation in shallow cover.

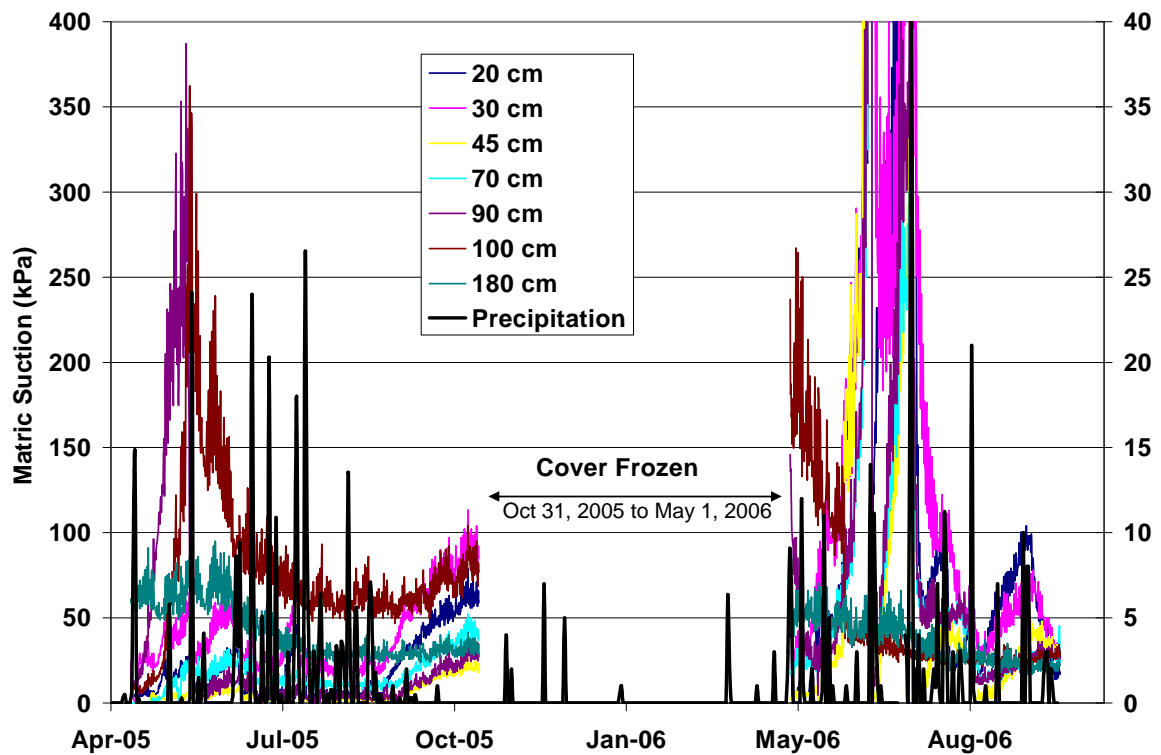
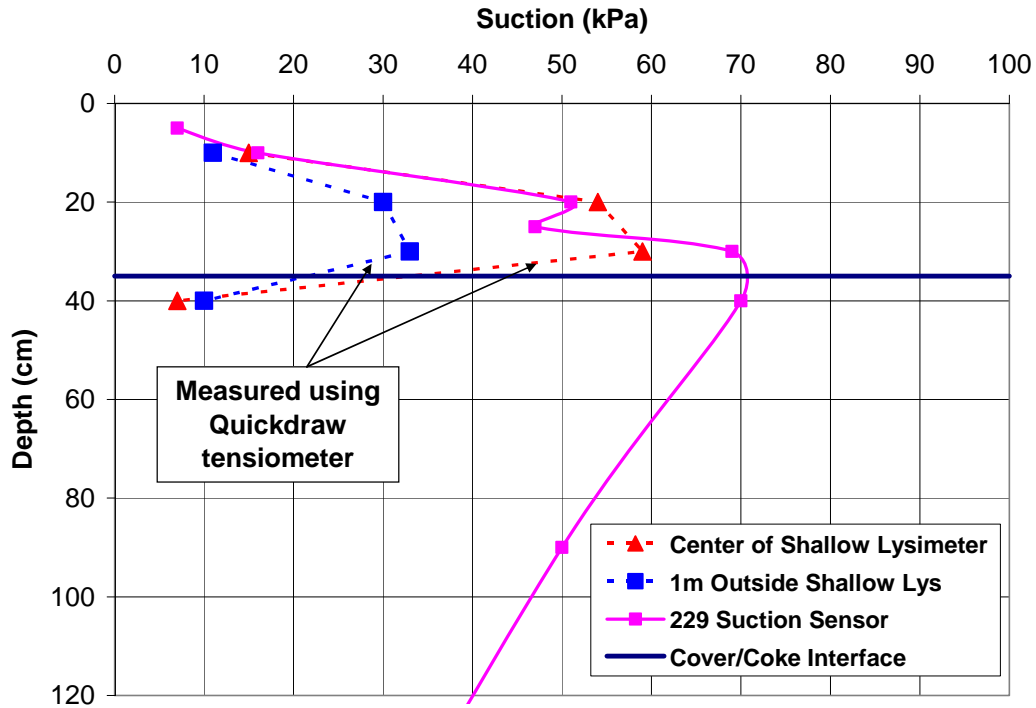
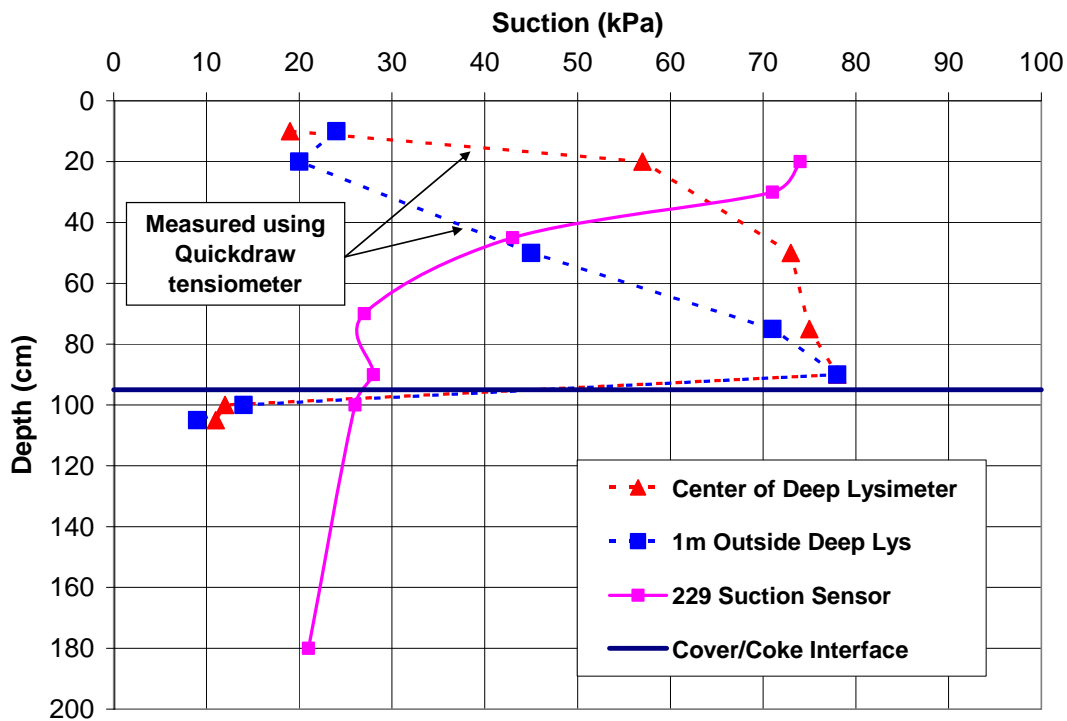


Figure 4.48 229 suction sensor response to precipitation in deep cover.





**Figure 4.49** Comparison of soil matrix suction on the shallow cover using a Quickdraw tensiometer and 229 matric suction sensors measured on September 20, 2006.



**Figure 4.50** Comparison of soil matrix suction on the deep cover using a Quickdraw tensiometer and 229 matric suction sensors measured on September 20, 2006.

#### 4.3.12 Soil Gas

Gas probes installed in the shallow and deep covers were monitored for O<sub>2</sub> and CO<sub>2</sub> in 2005 and 2006. Measurements were made using a portable hand-held Electron Gastech GT CO<sub>2</sub> gas monitor which measured gas concentrations in per cent by volume of air. The gas probes were installed to a maximum depth of 4.7 m below grade on the shallow cover and 4.2 m below grade on the deep cover. The gas probes extended into the underlying sand tailings immediately below the coke-tailings interface.

Figure 4.51 to 4.58 present O<sub>2</sub> gas profiles in the shallow and deep covers. The highest concentrations of O<sub>2</sub> were encountered near surface where concentrations were close to atmospheric conditions (approximately 21%), reaching 20% on both covers. Below the covers, in the underlying coke, O<sub>2</sub> concentrations dropped rapidly with depth. Below the shallow cover, concentrations approached zero at 2.5 m below grade on the east end (Figure 4.51) and at 3.5 m below grade on the west end of the cover (Figure 4.52). Below the deep cover, concentrations approached zero immediately below the cover at 1.2 m below grade on the east end (Figure 4.53) and at 2.3 m below grade on the west end (Figure 4.54). These results indicate that there is a process or reaction within the coke or tailings that is consuming O<sub>2</sub>. The O<sub>2</sub> concentrations observed in the shallow and deep lysimeters remained elevated at depth (Figure 4.55 and Figure 4.56) indicating that no O<sub>2</sub> consumption is occurring within the lysimeters or that the lysimeters are exposed to atmospheric conditions (i.e. vented).

CO<sub>2</sub> concentration profiles are presented in Figure 4.57 and Figure 4.58 for the shallow cover and in Figure 4.59 and Figure 4.60 for the deep cover. CO<sub>2</sub> trends are similar to O<sub>2</sub>, with the highest concentrations occurring near surface in the cover materials and are lowest in the underlying coke.

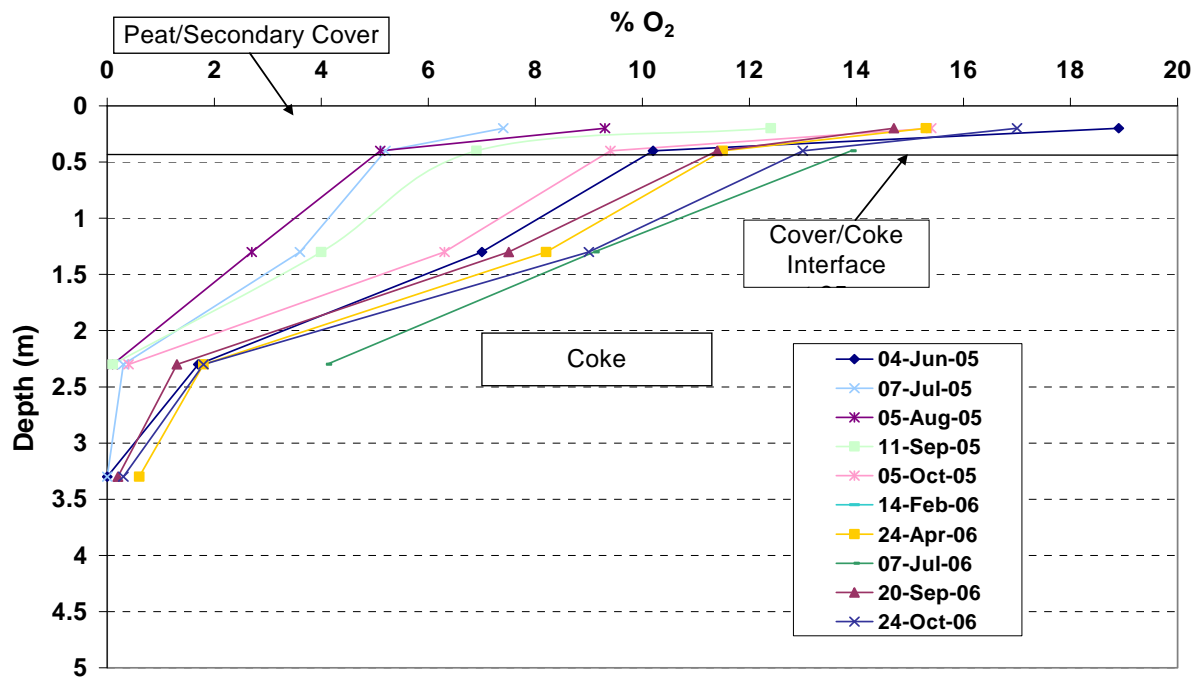


Figure 4.51 O<sub>2</sub> gas profile at GP050401 in the shallow cover east end.

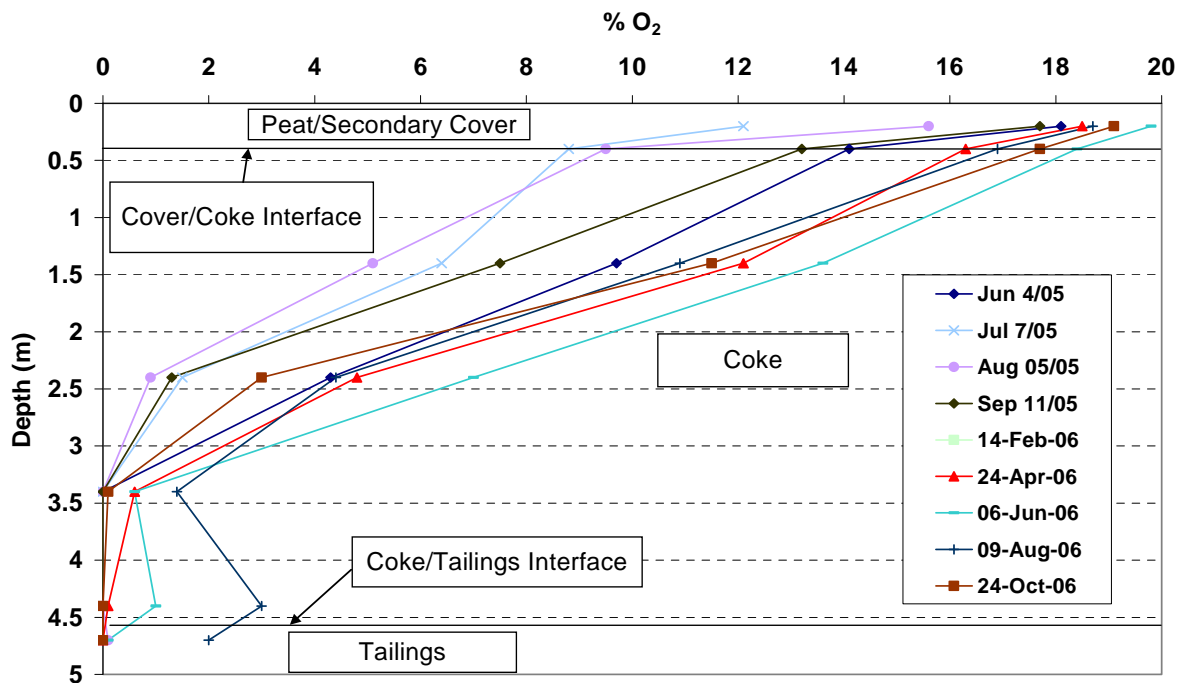


Figure 4.52 O<sub>2</sub> gas profile at GP050402 in the shallow cover west end.

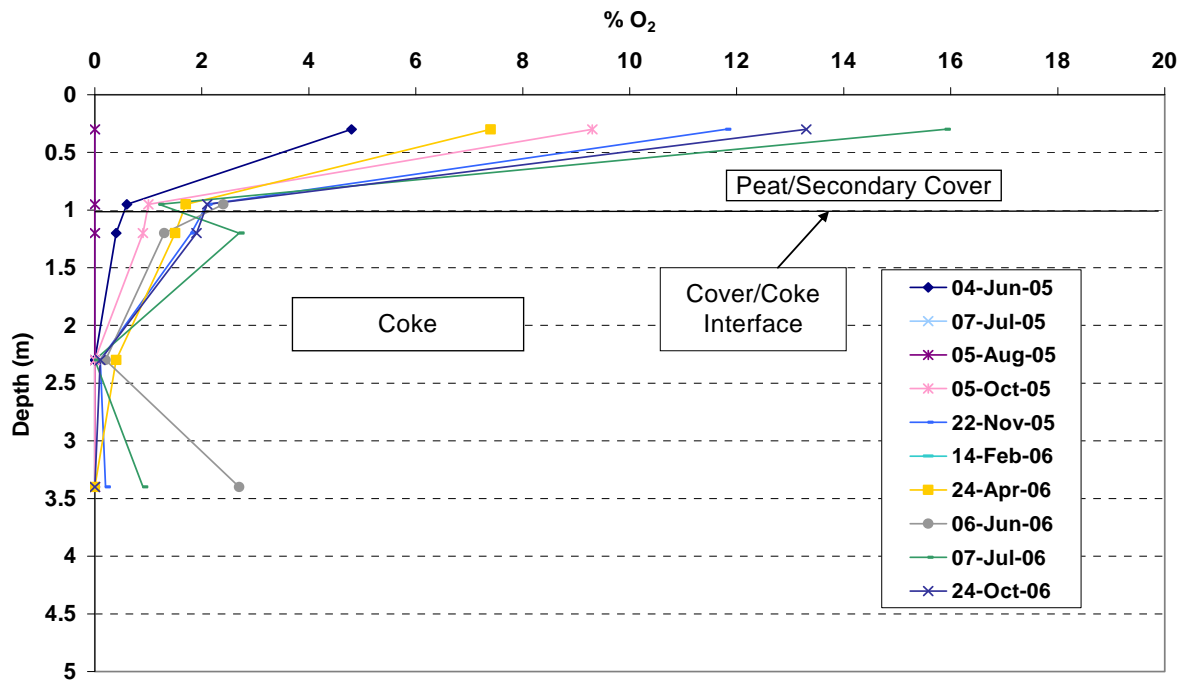


Figure 4.53 O<sub>2</sub> gas profile at GP050403 in the deep cover east end.

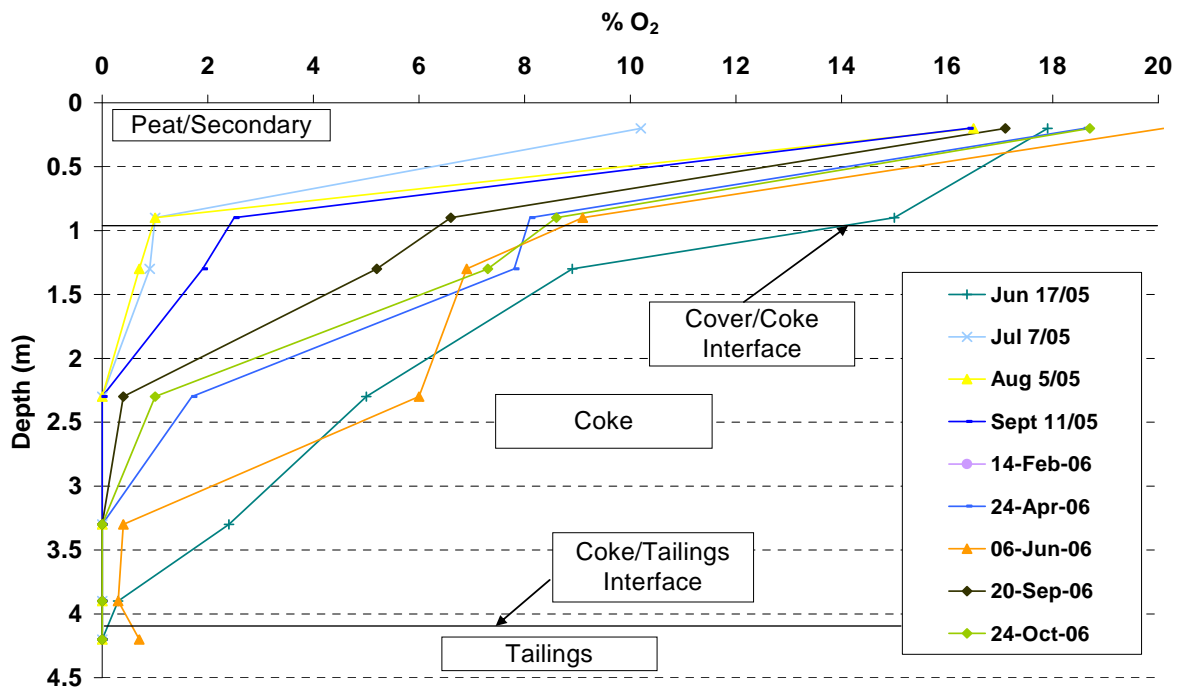


Figure 4.54 O<sub>2</sub> gas profile at GP050404 in the deep cover west end.

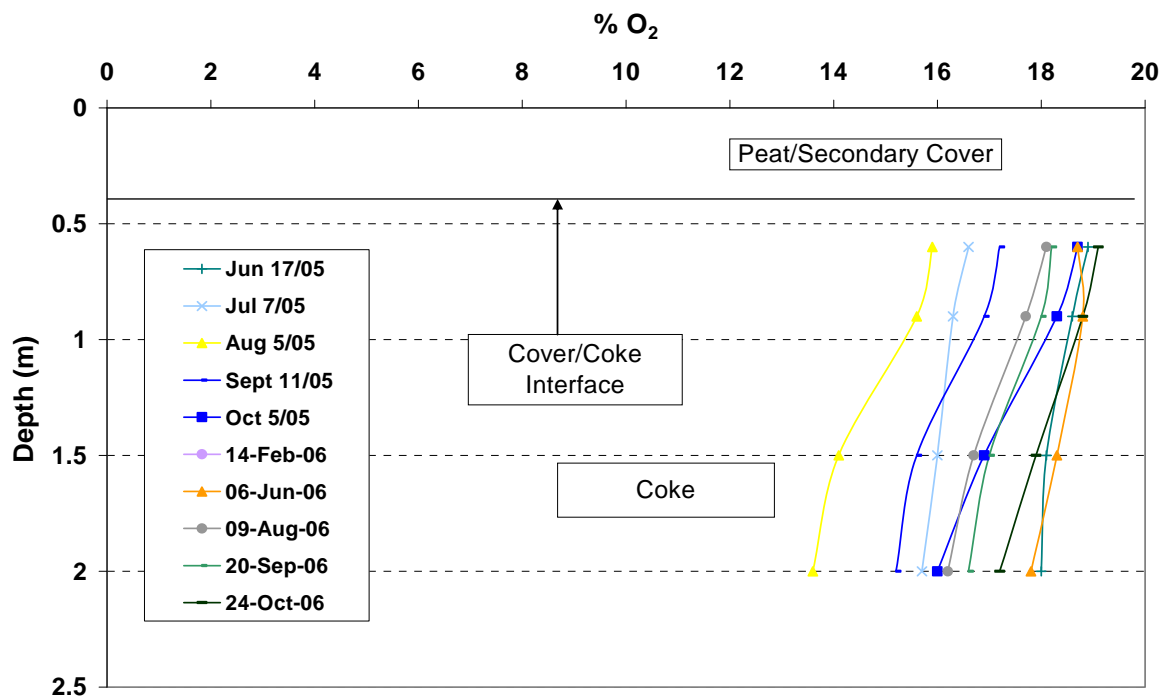


Figure 4.55 O<sub>2</sub> gas profile in the shallow lysimeter.

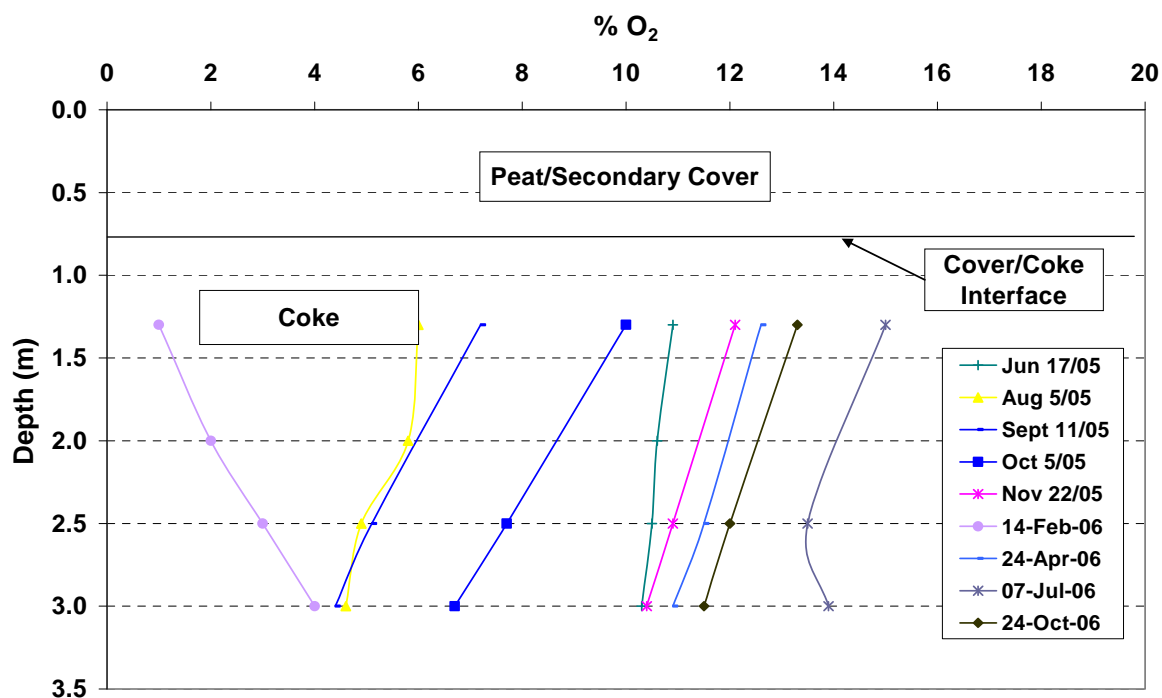


Figure 4.56 O<sub>2</sub> gas profile in the deep lysimeter.

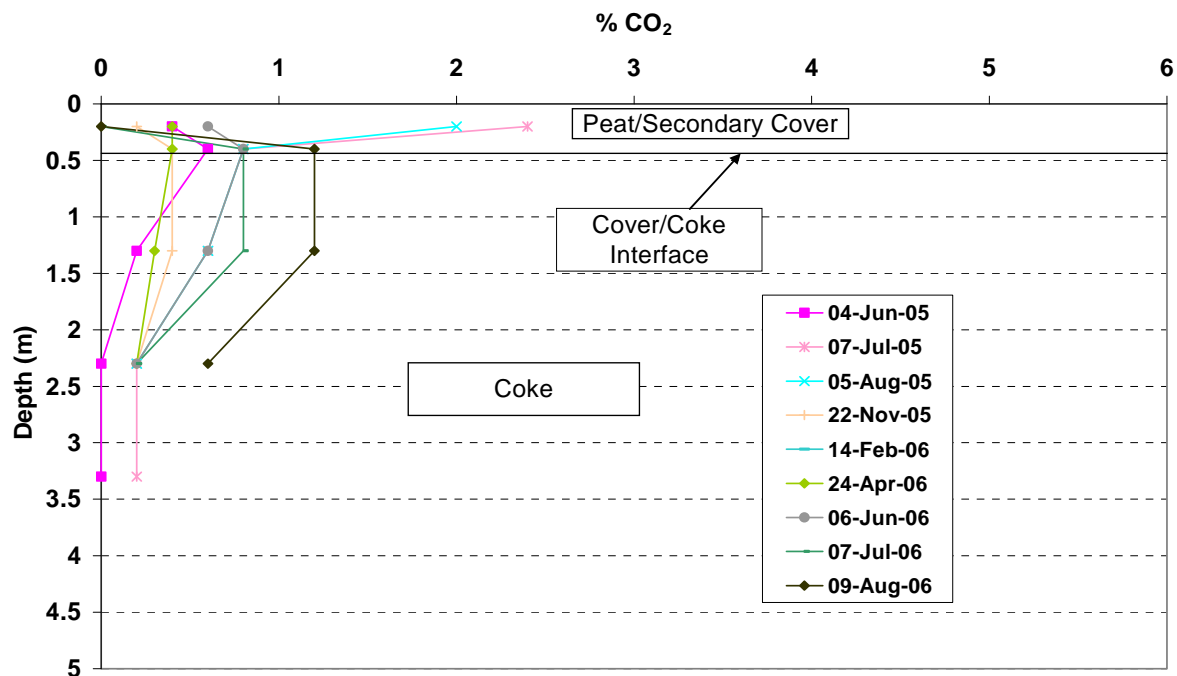


Figure 4.57 CO<sub>2</sub> gas profile at GP050401 in the shallow cover east end.

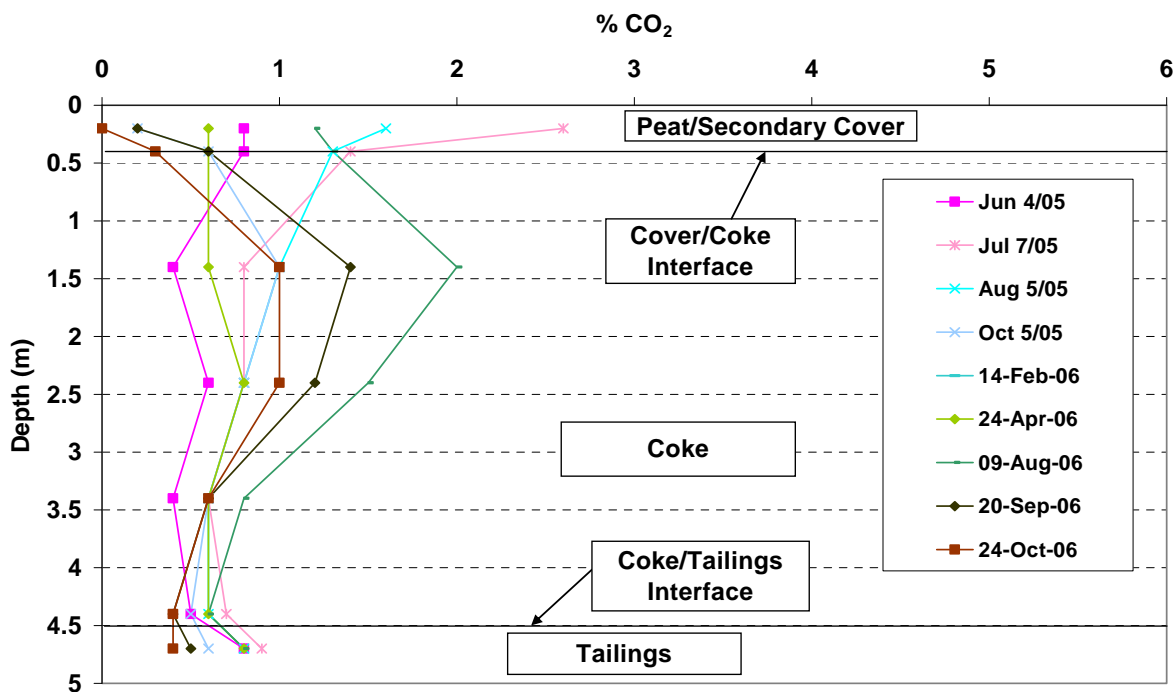


Figure 4.58 CO<sub>2</sub> gas profile at GP050402 in the shallow cover west end.

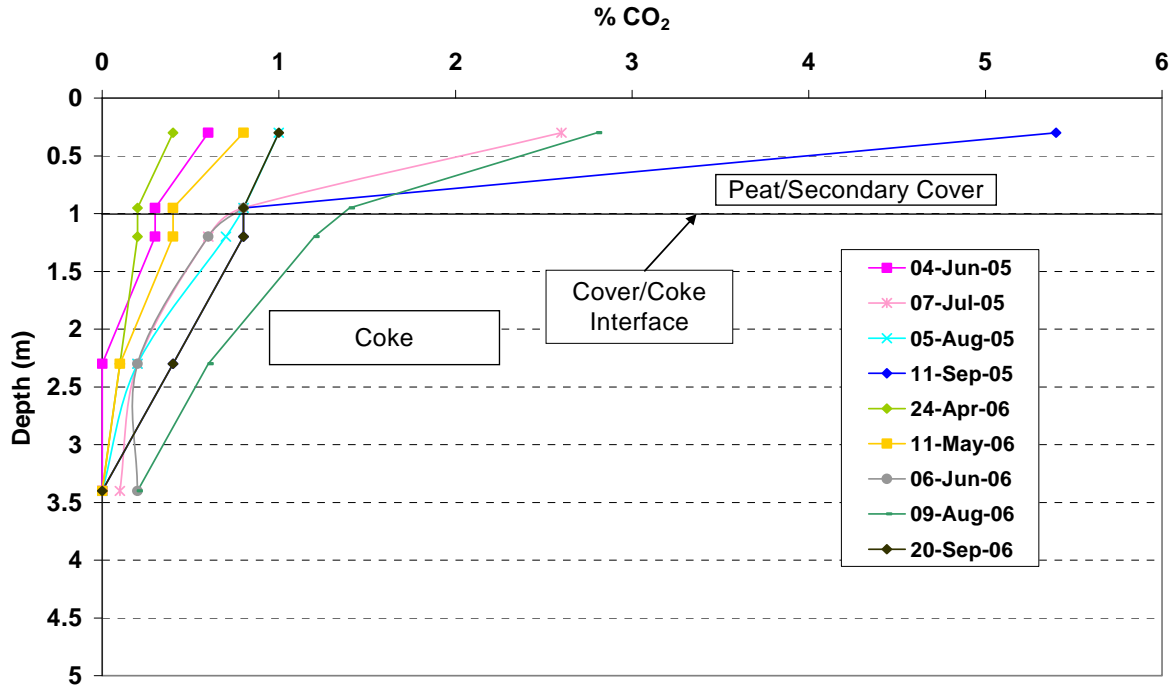


Figure 4.59 CO<sub>2</sub> gas profile at GP050403 in the deep cover east end.

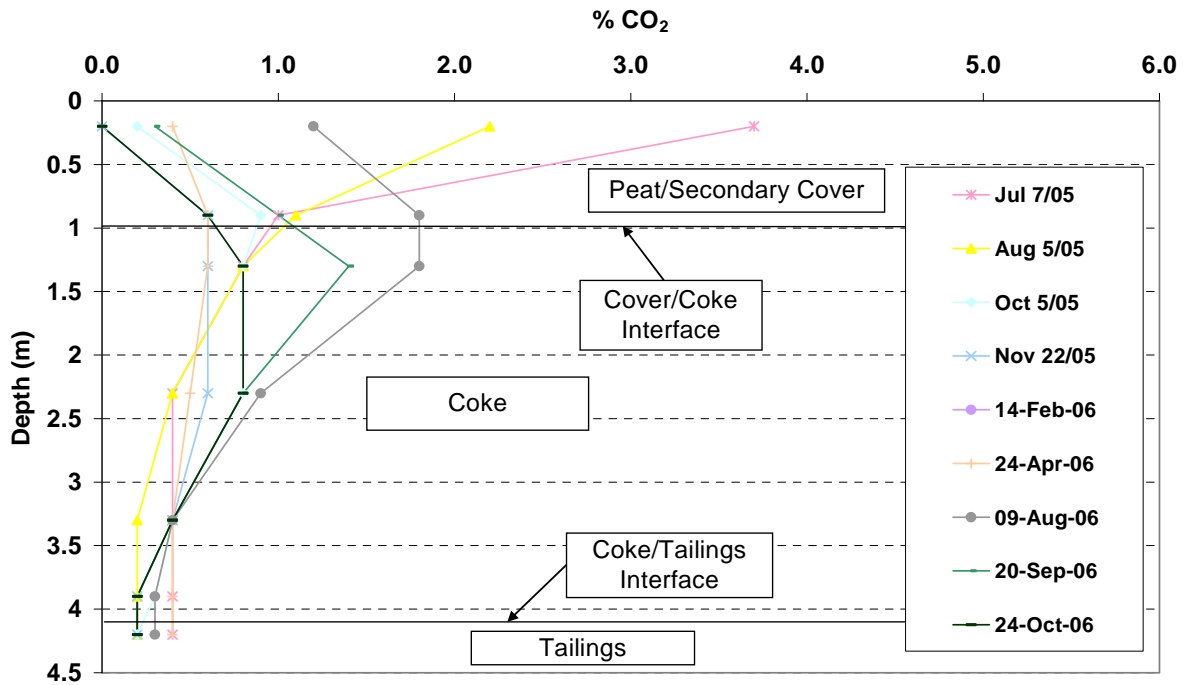


Figure 4.60 CO<sub>2</sub> gas profile at GP050404 in the deep cover west end.

#### 4.3.13 Lysimeter Monitoring

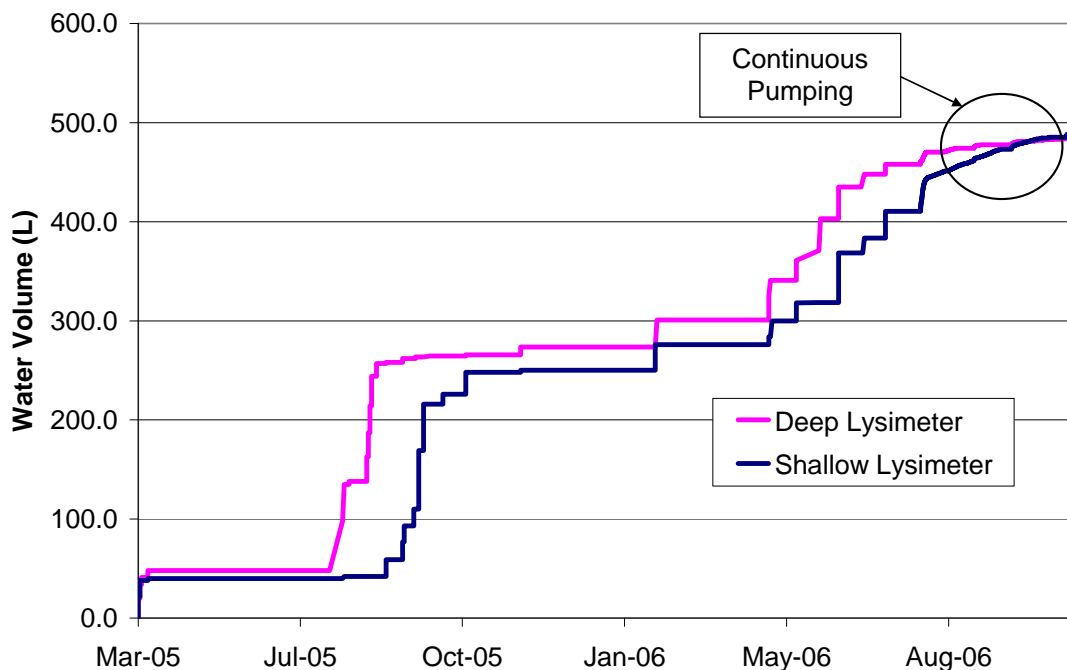
Direct measurement of net percolation through the covers was attempted by measuring the depth of water in the lysimeters over time. As part of the design criteria for the lysimeters, it was imperative to ensure that the pressure head and hydraulic gradient profiles within the lysimeter corresponded to the pressure head and hydraulic gradient profiles outside of the lysimeter. To maintain the hydraulic gradient profile, the design of the lysimeters required that they be pumped at least bi-weekly during the summer months. This would minimize bypass flow around the lysimeter instead of into the lysimeter (Appendix A).

Pumping of the lysimeters resulted in the development of a draw-down cone or cone of depression (Heath 1983) being formed inside the lysimeter within the coke. As a cone of depression develops surrounding a pumping well, the in-flow to the well decreases. The cone of depression appeared to form relatively quickly in the lysimeters after pumping only a few litres of water, leading to a rapid decrease in pumping rates. This made it difficult to efficiently remove water from the lysimeters. When pumping was discontinued, the water level in the lysimeter would return to normal once the cone of depression had dissipated. Due to the length of time required to pump down the lysimeters, it was not possible to accurately determine the infiltration rates through the covers. Figure 4.61 presents the volume of water pumped from each lysimeter in 2005 and 2006. The lysimeters were not pumped or monitored over the winter of 2005/2006 except for once in February 2006 with limited success; the water in the peristaltic pump tubing froze in the cold temperatures. The total volume of water pumped from the shallow lysimeter was 488 litres and from the deep lysimeter was 484 litres.

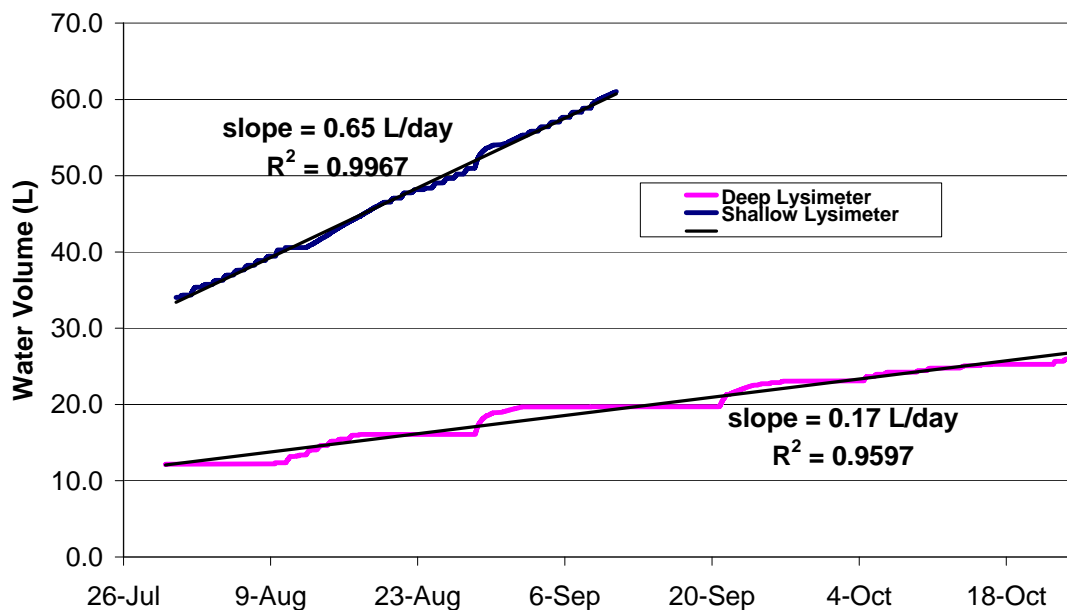
From July 25 to October 25, 2006 (91 days), the shallow and deep lysimeters were pumped continuously in an attempt to measure infiltrating water as it entered the lysimeter. This was accomplished using battery-powered peristaltic pumps connected to solar panels. The volume of water pumped during this period was measured using tipping bucket rain-gauges connected to an event logger, which logged the total number of tips recorded at each lysimeter. However, the event logger at the shallow lysimeter stopped functioning on September 13<sup>th</sup>, so only data from July 25<sup>th</sup> to September 13<sup>th</sup> (50 days) for the shallow lysimeter was used for analysis. The volume of water removed during the continuous pumping program is presented in Figure 4.62.



Assuming that water was removed from the lysimeters as quickly as it was released from the coke, an estimate of the net percolation rate can be made.



**Figure 4.61** Volume of water pumped from the tank lysimeters on the shallow and deep covers.



**Figure 4.62** Comparison of volume of water pumped over time during period of continuous pumping from July 25, 2006 to October 24, 2006.

The pumping rate from the shallow lysimeter was estimated to be 0.65 L/day and the pumping rate from the deep lysimeter was estimated to be 0.17 L/day during the period of continuous pumping. Knowing the surface area of the lysimeter tanks (diameter = 2.44 m, area = 4.67 m<sup>2</sup>), the estimated percolation rate was calculated. The estimated percolation rate for the shallow cover was 0.14 mm/day and the estimated percolation rate for the deep cover was 0.04 mm/day. Therefore, the net percolation for the shallow lysimeter (over the 50 days of pumping) is estimated to be 7.0 mm, which compares to precipitation for the pumping period of 66 mm, or about 10.6% net percolation.

Similarly, the net percolation for the deep lysimeter (over the 91 days of pumping) is estimated to be 3.6 mm, which compares to precipitation for the pumping period of 103 mm, or about 3.5% net percolation.

It should be noted that the results from the lysimeter monitoring were not reliable for making daily net percolation estimates through the covers because the water levels were not monitored on a daily basis.

## CHAPTER 5

### ANALYSIS

This chapter provides an interpretation of the data presented in Chapter 4. The interpretation will focus on estimating the AWHC of each cover, evaluating cover performance within the LCCS framework and development of a water balance for the two covers over the period of the monitoring.

#### 5.1 Water Volumes

The total water volume stored per square metre of cover ( $\text{m}^3/\text{m}^2$ , referenced as mm of water) was calculated using the water content data measured by the TDR sensors in each cover. The soil stations consisted of a nest of TDR sensors at various depths along the cover profile. Each cover was divided into representative increments of cover depth corresponding to each sensor. Each increment covered a depth interval spanning between the mid-points above and below any given sensor and the adjacent sensors. The water volumes were calculated by multiplying the water content at each sensor by the thickness of each corresponding section. These water volumes were integrated to calculate the total volume of water stored in the cover profile. The nominal cover thicknesses were 35 cm for the shallow cover, included 15 cm of peat-mineral mix and 20 cm of secondary, and 100 cm for the deep cover, including 15 cm of peat-mineral mix and 85 cm of secondary. However, the actual layer thicknesses varied at the location that the sensors were installed on the deep cover. Therefore, for the purposes of calculating the volume of water stored in each cover, the actual layer thicknesses for the deep cover were 25 cm of peat-mineral mix and 70 cm of secondary, for a total cover thickness of 95 cm.

Figure 5.1 and Figure 5.2 present the total water volumes over the study period for the shallow and deep covers, respectively. The total volume of voids per unit area of cover is also plotted for each soil type to give an indication of the maximum possible water volumes attainable at saturation for each soil horizon. The precipitation is also plotted to illustrate the effect it has on the total volume of water stored in each cover and the cover response to precipitation.

The deep cover has a larger water storage capacity than the shallow cover due to the greater cover depth as observed in Figure 5.1 and Figure 5.2. The shallow cover stores less than 100 mm of water and only exceeds 100 mm after significant rainfall events. The deep cover stores more than 200 mm of water and exceeds 300 mm of water after significant rainfall.

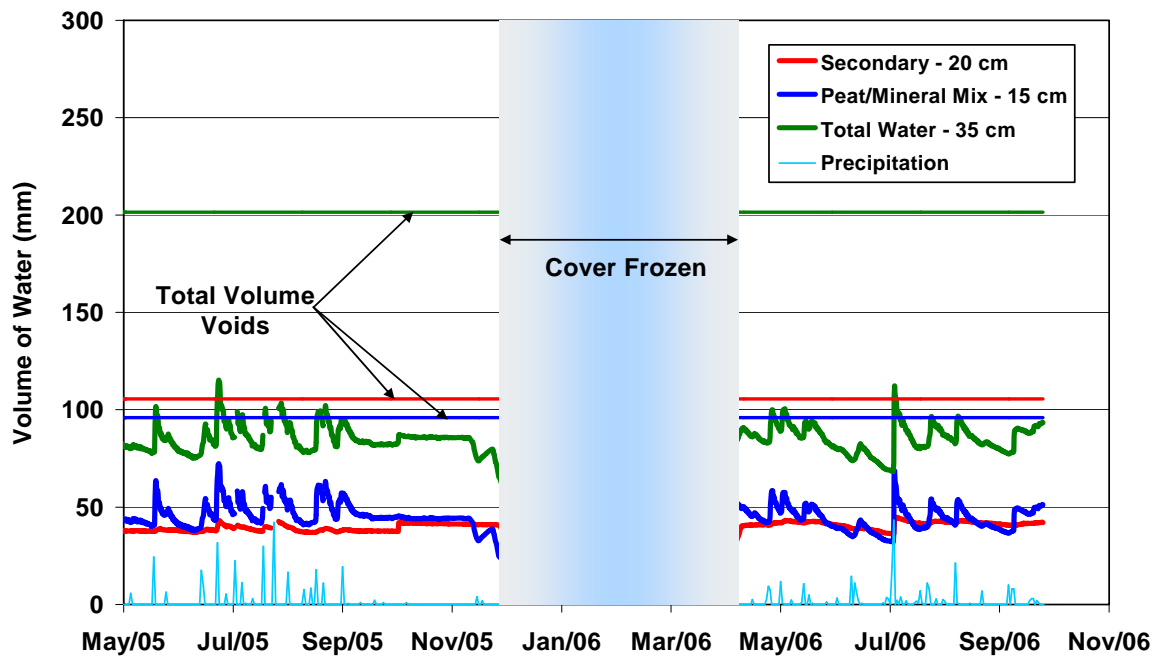


Figure 5.1 Volume of water stored in the shallow cover.

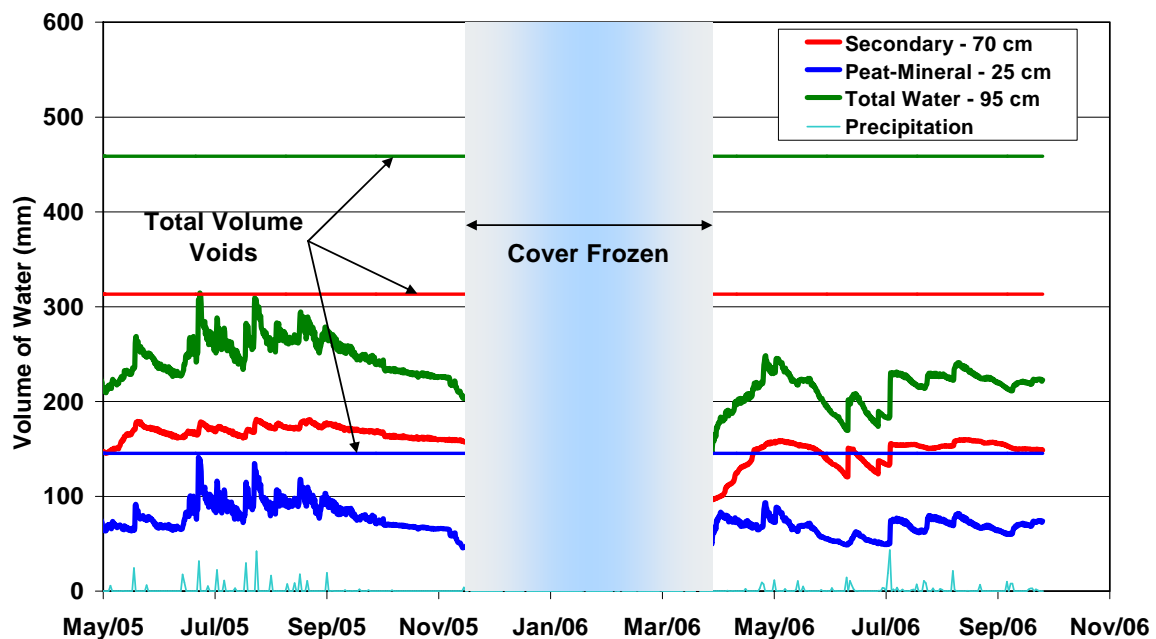


Figure 5.2 Volume of water stored in the deep cover.

Generally, the total moisture stored in the shallow cover was similar for both 2005 and 2006 (Figure 5.1). Peak moisture storage for both years appears to be similar, up to a maximum of 113.8 mm of water measured on June 24, 2005 and 112.4 mm of water measured on July 11, 2006. Even though rainfall for 2005 was higher than 2006, the cover appeared able to regain similar moisture levels in 2006 with less precipitation (Figure 5.1). The shallow cover appears to dry to a residual condition of approximately 75 mm of water following extended dry periods.

Overall, the water volume stored in the deep cover was higher in 2005 than in 2006 (Figure 5.2). Peak water storage in 2005 reached a maximum of 312 mm of water measured on June 23. In 2006, peak storage was 248.4 mm on May 3, which occurred only after the spring snow melt. After a relatively dry spring, in which only 95 mm of rain fell (as compared to a long term average of 134 mm for the region) the deep cover became extremely dry. After a major storm event on July 10 and 11, 2006, where over 60 mm fell in just over 24 hours, the cover was able to regain moisture levels as high as 230 mm, but was not able to reach storage levels observed in 2005 (Figure 5.2).

Several factors can likely be attributed to the higher water volumes observed in the deep cover in 2005. There was no vegetation on the covers during the summer/fall of 2004, and plant growth was established in late spring of 2005. Therefore, no transpiration occurred during 2004 and the spring of 2005 and moisture losses were all evaporative. In addition, September, October and November of 2004 saw 118 mm precipitation, which is approximately 18% higher than the normal of 98.6 mm at the Fort McMurray Airport. The absence of AET and typically low fall evaporation in 2004 allowed moisture to be stored in the soil prior to winter freeze-up. The spring freshet and higher than normal precipitation in 2005 allowed for water volumes to remain relatively high. The fall of 2005 was extremely dry with only 14 mm of precipitation from September to November. Figure 5.2 illustrates the sharp decrease in water volume during the fall of 2005.

## **5.2 Field Capacity, Wilting Point and Available Water Holding Capacity**

The AWHC of the covers is the volume of water stored between the wilting point (WP) and the field capacity (FC). The AWHC will determine the covers ability to sustain plant life during extended dry or drought periods. The FC is the water content on the SWCC at -33 kPa in fine grained soils (eg. silts and clays) and -10 kPa for coarser soils (eg. sands). The wilting point is

the water content at -1500 kPa, which is the maximum potential most plants can withstand before permanently shutting down. The FC and WP of the secondary soil were estimated based on the laboratory SWCCs. The FC and WP of the secondary layer was estimated to be  $0.35 \text{ m}^3/\text{m}^3$  and  $0.21 \text{ m}^3/\text{m}^3$ , respectively (Figure 4.3). The WP and FC for the peat-mineral mix were determined from SWCCs taken from Shurniak (2003). The FC of the peat-mineral mix fell in a range between  $0.28 \text{ m}^3/\text{m}^3$  and  $0.35 \text{ m}^3/\text{m}^3$ . The range for the WP of the peat-mineral mix, according to Shurniak (2003), was between  $0.17 \text{ m}^3/\text{m}^3$  and  $0.25 \text{ m}^3/\text{m}^3$ , respectively. AWHC calculations were completed using intermediate values of FC and WP for the peat-mineral mix of  $0.30 \text{ m}^3/\text{m}^3$  and  $0.20 \text{ m}^3/\text{m}^3$ , respectively. Table 5.1 contains a summary of the water volumes stored in each cover at WP and FC.

**Table 5.1 Volume of water stored in each cover at field capacity and wilting point.**

Layer	FC (in VWC)	Storage at FC (mm)	WP (in VWC)	Storage at WP (mm)	AWHC (mm)
Shallow Cover Peat-mineral – 15 cm	0.30	60	0.20	40	20
Shallow Cover Secondary – 20 cm	0.35	70	0.21	42	28
Shallow Cover Total	-	130	-	82	<b>48</b>
Deep Cover Peat-mineral – 25 cm	0.30	75	0.20	50	25
Deep Cover Secondary – 70 cm	0.35	245	0.21	147	98
Deep Cover Total	-	320	-	197	<b>123</b>

VWC – volumetric water content

At WP, the shallow and deep covers stored a water volume of 82 mm and 197, respectively. At FC, the shallow and deep covers stored a water volume of 130 mm and 320 mm, respectively (Table 5.1). Therefore, the AWHC for the shallow and deep covers is 48 mm and 123 mm, respectively.

The LCCS (Cumulative Environment Management Association 2006) outlines a texture based approach for determining the profile AWHC. Using the methodology described in Section 4.2 of the LCCS manual, the AWHC for the shallow and deep covers were estimated. Table 5.2 presents the estimated AWHC for the shallow and deep covers. The fourth column in Table 5.2 is a multiplier defined in the LCCS for all soil horizons that are permeable to water, that is, any

soil that contributes to the AWHC of the soil profile. Table 6 of the LCCS lists the AWHC multipliers for natural and reclaimed soils, the multiplier used in Table 5.2 for both the peat-mineral and secondary was 1.7 mm/cm. The LCCS calculated values for AWHC for the shallow and deep covers were 57.5 mm and 154.5 mm, respectively. These values compare well with the AWHC estimated above; a 18.0% difference and a 22.7% difference for the shallow and deep covers, respectively.

**Table 5.2 – Profile AWHC based on the LCCS Field Manual**

<b>Layer</b>	<b>Texture</b>	<b>Horizon Thickness (cm)</b>	<b>Multiplier (mm/cm)</b>	<b>AWHC (mm)</b>
Shallow Peat-mineral	SL	15	1.7	25.5
Shallow Secondary	CL	20	1.6	32
Shallow Total		35		57.5
Deep Peat-mineral	SL	25	1.7	42.5
Deep Secondary	CL	70	1.6	112
Deep Total		95		154.5

Note: - SL = sandy loam, CL = clay loam

- Multiplier is determined from Table 6 of the LCCS Field Manual (Cumulative Environment Management Association 2006).

Figure 5.3 illustrates the fluctuations of the stored water in the shallow cover. Figure 5.4 and Figure 5.5 present a closer look at the water storage of each layer of the cover system. Water storage in the peat-mineral layer remains above wilting point for the entire 2005 and 2006 summer seasons with the exception of a dry period in late June and early July of 2006 when the storage levels dropped well below the wilting point (Figure 5.4). The volume of water stored in the peat-mineral layer never reaches FC. Water storage in the secondary layer remains at or below wilting point levels for the entire period (Figure 5.5). Therefore, the only water available for plant uptake is the water that is stored in the peat-mineral layer.

The deep cover stores a water volume of 209.5 mm at WP and a water volume of 377.5 mm at FC (Table 5.1). Figure 5.6 illustrates the fluctuations of the stored water in the deep cover. Figure 5.7 and Figure 5.8 present a closer look at the water storage of each layer of the cover system. The water volumes stored in the peat-mineral layer of the deep cover (Figure 5.7), when related to FC and WP, are similar in shape to those in the shallow cover (Figure 5.4). The water volumes in the deep peat-mineral layer are generally much higher in 2005 than in 2006. In 2005, the water volume slightly exceeds the estimated field capacity after two large precipitation events,

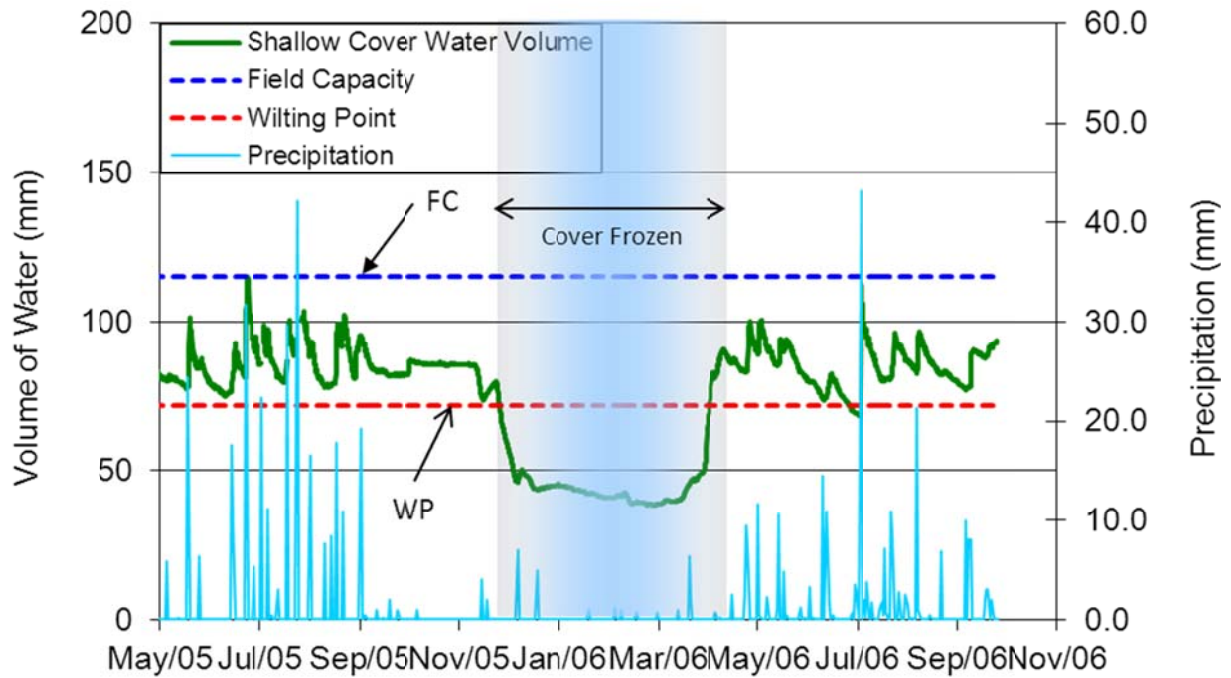
one in June and one in July. In 2006, the water volumes in the deep peat-mineral layer remain well below field capacity throughout the monitoring period and drop below wilting point during an extended dry period in late June and early July.

The water volumes stored in the secondary layer in the deep cover (Figure 5.8) are similar in shape to the shallow cover (Figure 5.5). However, when related to the FC and WP, the deep secondary was able to retain much more water than the shallow secondary. In 2005, the water volume stored in the secondary layer remained above the wilting point throughout the year and remained higher than storage levels observed in all of 2006, however, it is important to note that the covers do not reach the FC, i.e. the covers never really wet-up.

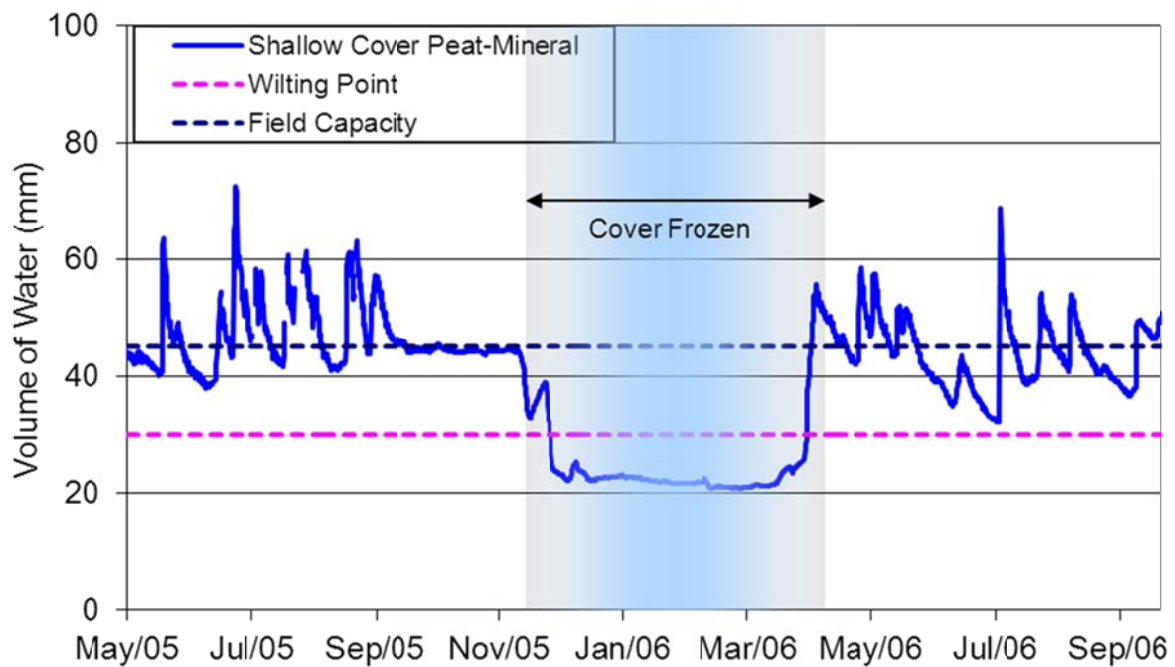
The AWHC of a recently placed cover soil will change over time. As the covers mature, it is expected that the permeability of the cover materials will increase as structure develops in the soil due to freeze thaw cycles, development of root systems of site vegetation and burrowing of insects and rodents (Boese 2003). This increase in permeability caused by structure in the soil will likely reduce the AWHC. There was a slight increase in hydraulic conductivity noted in the cover materials from 2005 to 2006, however, it is difficult to define a trend based on the limited data available (see Table 4.4). Additional testing in subsequent seasons would be required to define a clear trend in the hydraulic conductivity.

The coke, for the most part, is below the frost line and the rooting zone of most vegetation and does not freeze during the winter. Therefore, the coke, in contrast to the cover soils, has the potential for a slight decrease in hydraulic conductivity as the material settles over time.

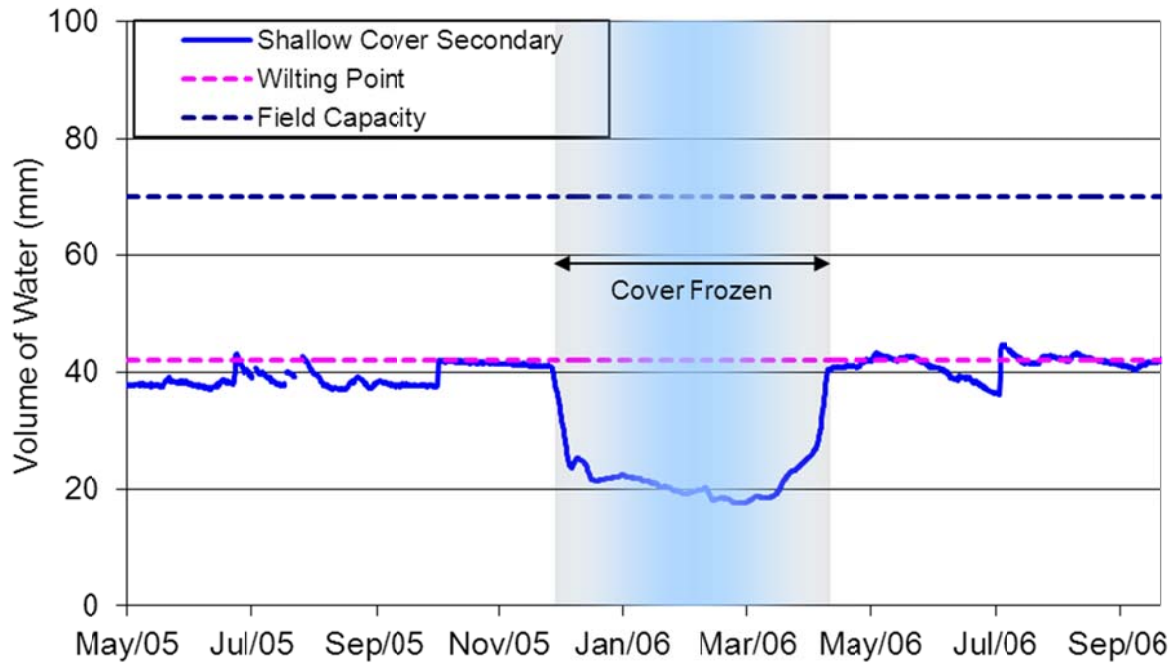




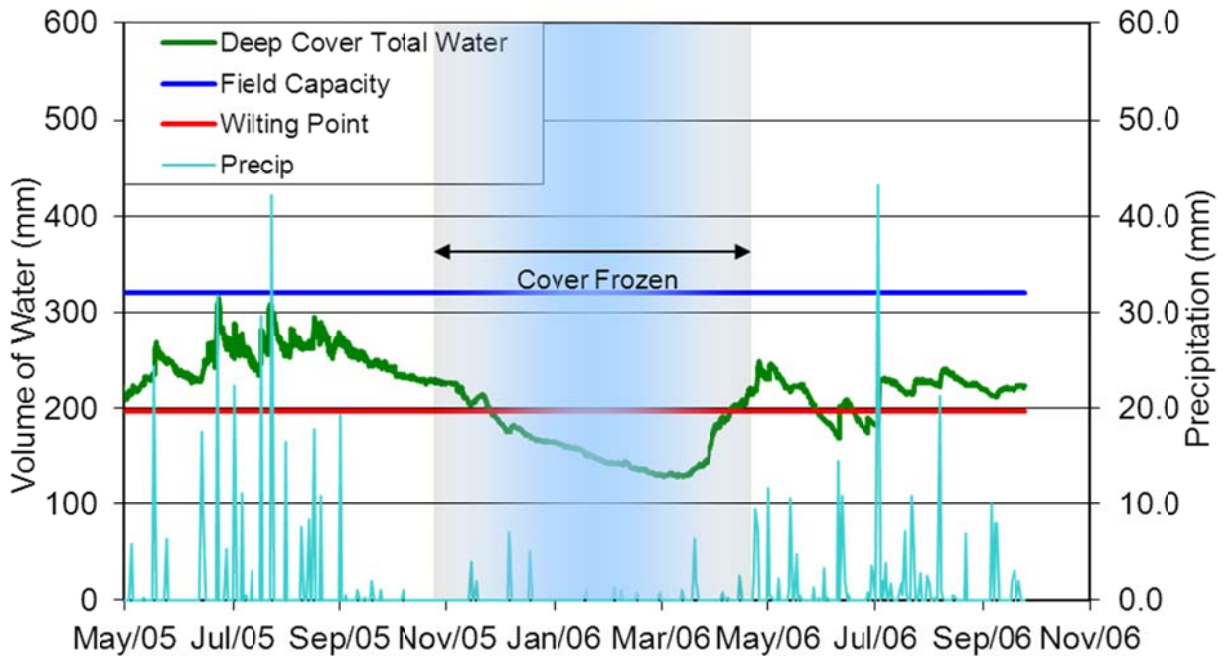
**Figure 5.3 Comparison of water volume with field capacity and wilting point on the shallow cover.**



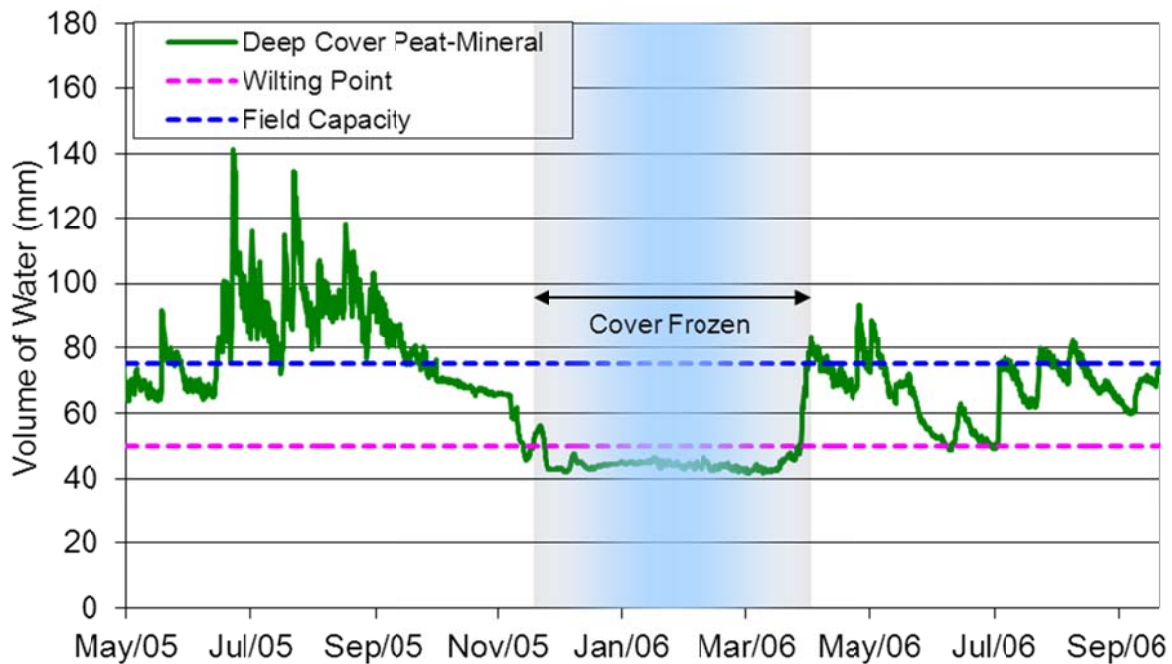
**Figure 5.4 Comparison of water volume with field capacity and wilting point on the shallow cover for the peat-mineral layer.**



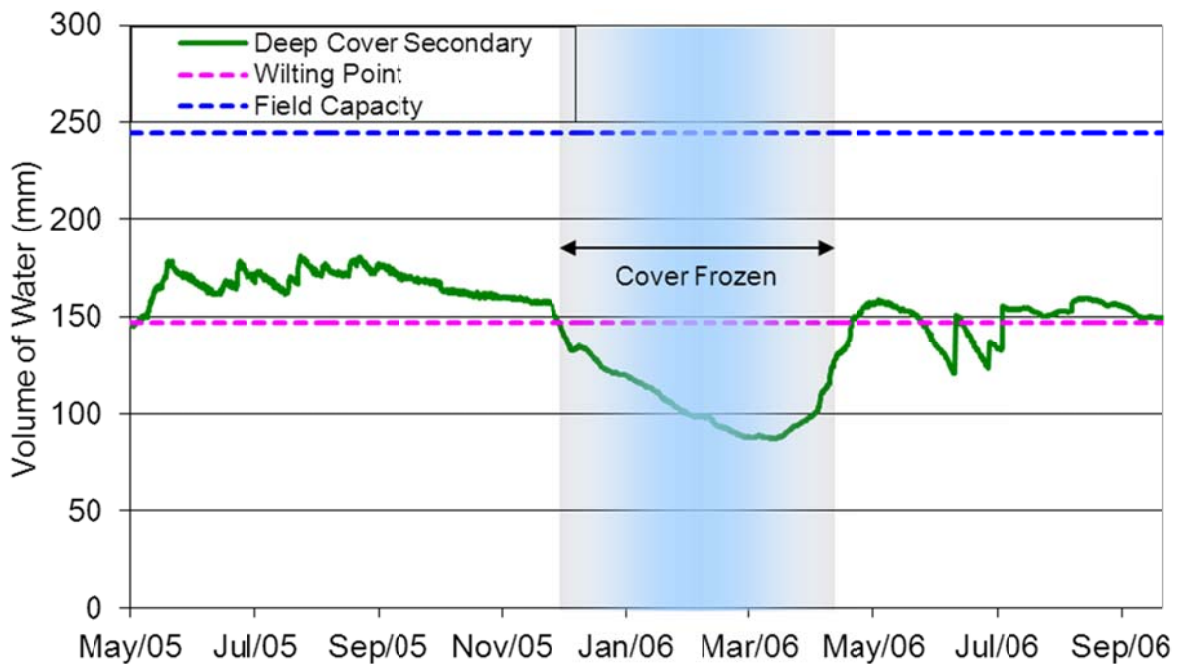
**Figure 5.5 Comparison of water volume with field capacity and wilting point on the shallow cover for the secondary layer only.**



**Figure 5.6 Comparison of water volume with field capacity and wilting point on the deep cover.**



**Figure 5.7 Comparison of water volume with field capacity and wilting point on the deep cover for the peat-mineral layer only.**



**Figure 5.8 Comparison of water volume with field capacity and wilting point on the deep cover for the secondary layer only.**

To evaluate the performance of the cover systems, it is useful to compare the results to a similar site with similar cover properties. The Syncrude 30 Dump research site contains 2 covers

of similar make-up to the covers on the coke watershed. The 30 Dump D2 and D3 covers have the same nominal thicknesses of peat-mineral and secondary as the shallow and deep covers, respectively. However, two main differences between the two sets of covers is that the 30 Dump site covers were placed on a significant slope and the covers overlie a waste shale dump (Boese 2003). Due to their close proximity, it is reasonable to assume that both sites would be exposed to similar meteorological conditions, such as precipitation, air temperature, etc. The significant differences are that the 30 Dump covers are placed on a north facing slope and are underlain by saline/sodic shale. The shale has a lower hydraulic than the secondary. Also, the 30 Dump covers were placed in 1999 and as such, have been exposed to weathering, freeze-thaw cycles, and more mature flora. Monitoring data for the 30 Dump covers were attained from a Syncrude research database. The database was available to researchers involved in reclamation at the Syncrude mine site. Details of the instrumentation at the 30 Dump can be found in Boese (2003).

Figure 5.9 presents a comparison of the shallow cover and the D2 cover at the 30 Dump research site. For a more meaningful comparison, the water volumes have been normalized to a cover thickness of 35 cm with a 15 cm peat-mineral layer and a 20 cm secondary layer because the peat-mineral layer for the D2 cover was measured to be 22 cm at the location of the moisture sensors. Water volumes were normalized by dividing each layer by its actual thickness then multiplying by the nominal thickness for each layer. The covers have normalized water volume curves that are remarkably similar in shape. However, the magnitude of the storage volumes in the D2 cover is much more than that of the coke shallow cover. Volumes stored in the D2 cover are as much as 60% higher.

Figure 5.10 presents a comparison of the deep coke cover and the 100 cm D3 cover. The water volumes have been normalized to a cover thickness of 100 cm with a 25 cm peat-mineral layer and a 75 cm secondary layer. As observed with the 35 cm covers, the water volume curves are similar in shape with the D3 cover storing substantially more water than the coke deep cover. Water volumes stored in 2005 in the D3 cover are approximately 40% higher than the deep coke cover. The difference between the two curves becomes more profound in 2006 when the D3 cover water volumes are up to 80% higher. The probable reason for this difference from 2005 to 2006 is that the coke covers were non-vegetated in 2004 and there was a surplus or “carry-over”

of water stored in the soil due to the absence of transpiration, as discussed in the previous section.

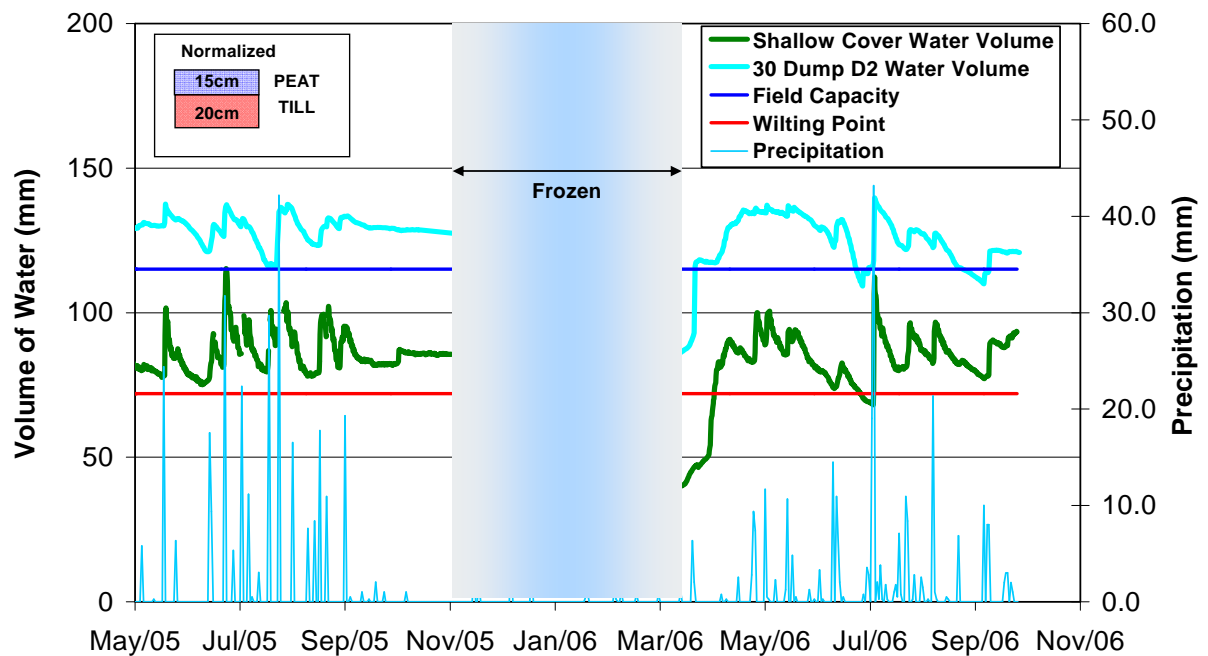
The ratio of available water (AW) to the AWHC can be used to compare the ability of different covers to store water. AW is the difference between the actual moisture content in a given soil and the WP for that soil type. Therefore, the ratio AW/AWHC gives a normalized comparison of the water volume stored in the cover relative to the maximum water volume that could be stored in the cover. Figure 5.11 presents the ratios of AW/AWHC for the coke watershed shallow and deep covers and the 30 Dump D2 and D3 covers for comparison.

Both the D2 and the D3 covers have much higher AW/AWHC ratios than the coke watershed covers (Figure 5.11). On the coke watershed, the deep cover shows a much higher degree of moisture storage in 2005, with a mean AW/AWHC ratio of around 0.53 ( $\sigma \pm 0.17$ ), compared to the shallow cover which has a mean ratio of 0.32 ( $\sigma \pm 0.15$ ). In comparison for 2005, the D3 and D2 covers had mean ratios of 1.30 ( $\sigma \pm 0.17$ ) and 1.29 ( $\sigma \pm 0.17$ ), respectively. In 2006, the deep cover, the shallow cover, the D3 cover, and the D2 cover had mean ratios of 0.24 ( $\sigma \pm 0.17$ ), 0.21 ( $\sigma \pm 0.17$ ), 1.26 ( $\sigma \pm 0.17$ ) and 1.22 ( $\sigma \pm 0.17$ ), respectively.

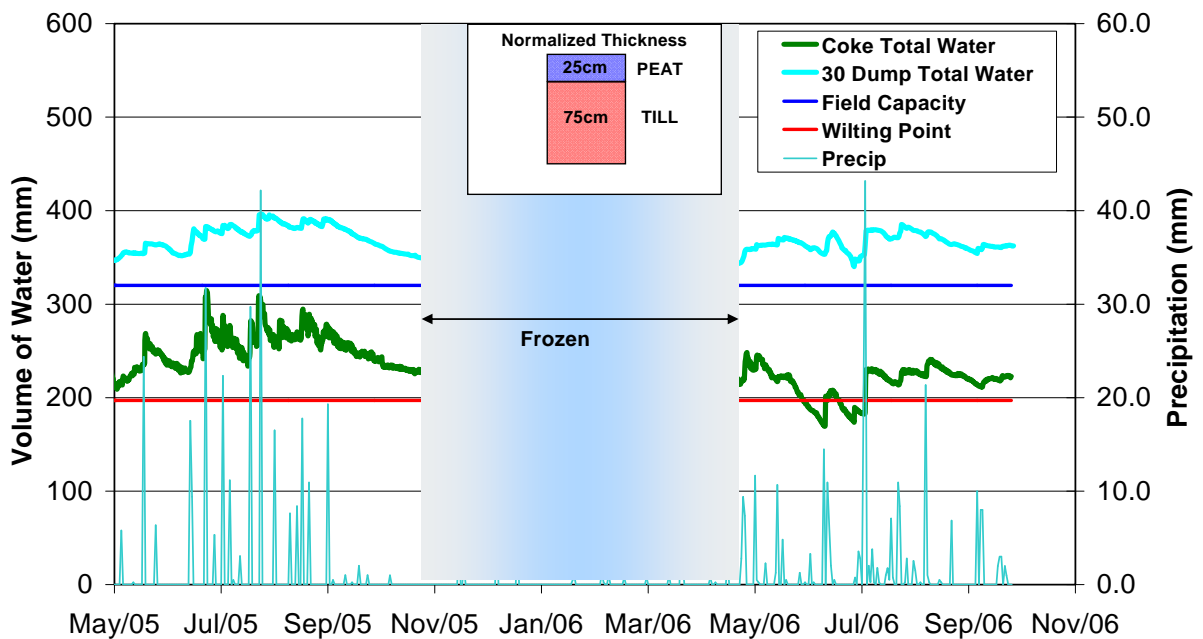
The 30 Dump was a shale overburden dump, but also contained pockets or lenses of lean oil sand (LOS), a sub economic oil sand material typically associated with the overburden stratigraphy. The shale overburden material had a  $K_s$  of less than  $1 \times 10^{-9}$  m/s (Rutten 2006) and typically the LOS had a  $K_s$  of approximately  $1 \times 10^{-6}$  m/s (Price 2005), which was similar to or higher than the secondary cover material. LOS was encountered below the cover in the upper part of the D3 cover slope (Kelln 2008). Kelln (2008) studied the spatial distribution of volumetric water content at the D3 cover and found perched water table conditions at the base of the cover in areas underlain by the low hydraulic conductivity shale. Areas underlain by LOS appeared to be under-drained, having a perched water table below the cover-waste interface. However, even in the areas below the LOS, volumetric water contents in the cover soils remained well above the volumetric water contents measured at the coke watershed covers (Figure 5.11).

Based on the findings by Kelln (2008), the relatively low hydraulic conductivity of the underlying shale at the 30 Dump site acted to impede percolation and maintained elevated volumetric water contents within the cover materials. Figure 5.11 clearly shows the effect that

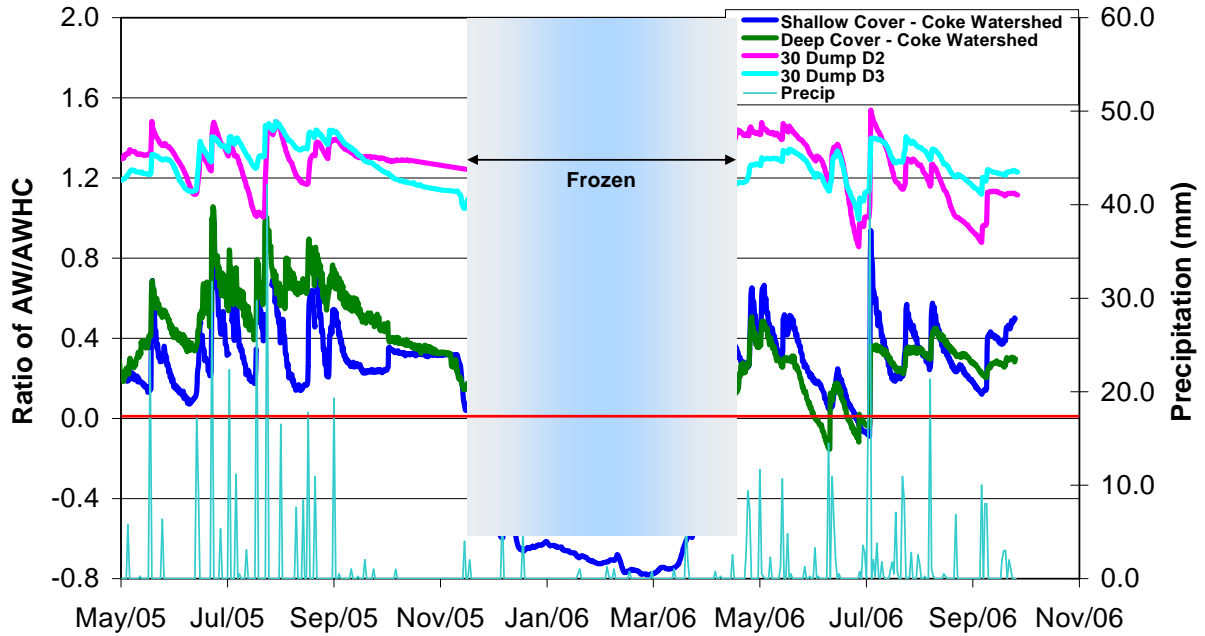
the underlying shale had on the ratio of AW/AWHC at the D2 and D3 covers when compared to the coke watershed covers.



**Figure 5.9** Comparison of normalized volume of water stored in the coke watershed shallow cover and the 30 Dump D2 cover to the estimated field capacity and wilting point.



**Figure 5.10** Comparison of normalized volume of water stored in the coke watershed deep cover and the 30 Dump D3 cover to the estimated field capacity and wilting point.



**Figure 5.11 Ratio of AW/AWHC for the coke watershed shallow and deep covers and the 30 Dump D2 and D3 covers.**

### 5.3 Water Balance Analysis

A seasonal, cumulative daily water balance was computed for both the shallow and the deep covers. In each case the daily change in measured soil storage, as calculated in Section 5.1, was compared to the water balance as calculated by Equation 2. The water balance was calculated for the typical field season which started after spring melt had occurred and ended at winter freeze-up. This period was assumed to be April 1 to October 31 for 2005 and in 2006 was from April 1 to October 4, which was the last date of available data for the year at the time the water balance was calculated.

Actual evapotranspiration (AET) was not a measured parameter and, therefore, it was considered a reasonable assumption to estimate AET as a ratio of potential evapotranspiration (PET) relative to the actual moisture available to the available water holding capacity of the soil (see Equation 5). The value of this ratio was calculated using site specific soil water contents during the growing season and could not be less than 0 (negative) or more than 1. During dry periods with little to no rain the ratio can be quite low (near or equal to 0) and after periods of rain, the ratio can be significantly higher. Boese (2003) measured an average AET/PET ratio for the 30 Dump site of 0.51 with a range from near 0 to 1.0. To estimate the AET/PET ratio for the

coke watershed, the FC and WP for each cover material were adjusted to match the observed changes in stored water. The AET/PET ratios can be linked to quality or overall health of vegetation (Strunk 2009) – lower values corresponding to poor vegetation and higher values corresponding to good, healthy vegetation.

### 5.3.1 Water Balance Components

Each component of the water balance was calculated using applicable data presented in Chapter 4. All of the units for the water balance were converted to mm/day for consistency. The data set collected by the automated data acquisition system was checked for errors and/or omissions that may have occurred due to equipment malfunction by OKC. Detailed assumptions made for each water balance component are listed below:

#### 5.3.1.1 Precipitation

The precipitation data used was collected by the meteorological station located on the shallow cover. Precipitation was assumed to be the same for both the shallow and deep covers.

Snow melt was calculated from the snow surveys conducted in March 2005 and February 2006 and applied as a single precipitation event (spring freshet). For each year, precipitation measured by the tipping bucket rain gauge that fell after the snow surveys were conducted and before daily air temperatures were above zero was added to the snow survey data.

#### 5.3.1.2 Actual Evapotranspiration (AET)

There was no direct measurement of AET at the site, therefore, the daily water balance was calculated estimating AET as a ratio of potential evaporation. The ratio was determined using the available water (AW) measured compared to an estimated AWHC (i.e. FC – WP). Potential evapotranspiration was calculated using the modified Penman method based on the climate data collected on-site as described in Section 2.3.4. AET for the purposes of the water balance calculation was determined using the following relationship:

$$AET = PET \times \theta_{rel} \quad (13)$$

where  $\theta_{rel}$  is the relative water content of a soil relative to its FC and WP. Equation 7 (from Page 20) can be rewritten as:



$$\theta_{rel} = \frac{\theta - \theta_{WP}}{\theta_{FC} - \theta_{WP}} \quad (14)$$

where  $\theta$  is the weighted average (over the estimated rooting depth) of the measured volumetric moisture content of the soil, and  $\theta_{WP}$  and  $\theta_{FC}$  are the moisture contents at the wilting point and field capacity, respectively.

The depth of soil participating in transpiration is restricted to the rooting depth of the cover vegetation. Vegetation was not well established on either cover until July 2005. Figure 5.12a to Figure 5.12f presents a series of photos that compare the vegetation growth on each cover from June 2 to July 7, 2005. Figure 5.12a to Figure 5.12d show the vegetation development of the shallow and deep covers for June 2 and June 24, 2005. During this time, vegetation was sparse and ground coverage was poor. However, by July 7, 2005, both the shallow and deep cover had improved vegetation growth with substantial ground coverage (Figure 5.12e and Figure 5.12f). For the water balance calculation, transpiration was assumed to be zero until the end of June. For the spring of 2005, prior to vegetation being established, AET was assumed to be only soil evaporation. With essentially no transpiration occurring, water loss from the soil was limited to evaporation from the upper few centimeters. During this period, evaporation was applied in the water balance as a direct percentage of PET. Once the vegetation was established and rooting depth increased, AET was part of the water balance calculation. The reality in the field would have seen AET gradually increasing over the spring as vegetation and rooting systems developed. However, to simplify the water balance calculation, using field observations of vegetation growth (Figure 5.12) AET was estimated to start on June 26, 2005. The water balance was estimated with an evaporation of 38% of PET for the period prior to June 26, 2005; this value was estimated in the water balance by fitting the measured  $\Delta S$  to the calculated  $\Delta S$  for the period.



a.) June 2, 2005 – Shallow Cover



b.) June 2, 2005 – Deep Cover



c.) June 24, 2005 – Shallow Cover



d.) June 24, 2005 – Deep Cover



e.) July 7, 2005 – Shallow Cover



f.) July 7, 2005 – Deep Cover

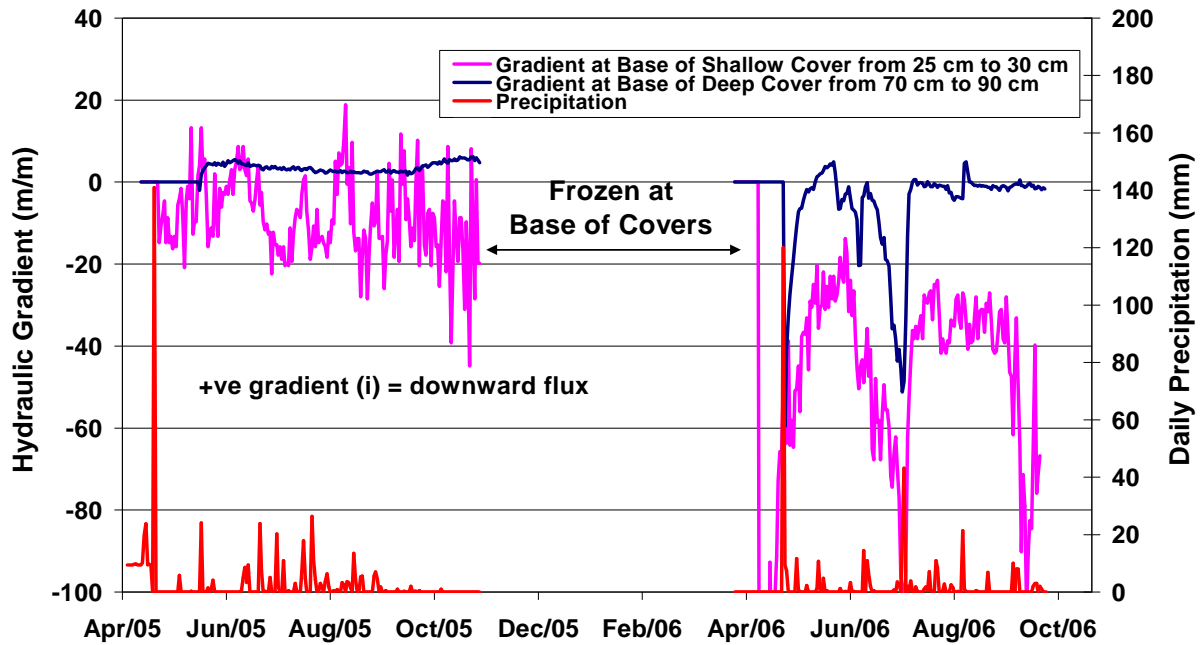
**Figure 5.12 Comparison of vegetation establishing on the shallow and deep covers.**

Shurniak (2003) conducted AET modeling of the 30 Dump site prototype covers assuming that the predominant vegetation type found on the reclamation covers was green foxtail and smooth brome. Green foxtail root mass distribution was measured at the 30 Dump site (van Rees and Jackson 2002). The two studies found that from 77.5% to 86.6% of the green foxtail root mass was concentrated in the top 15 cm of the covers. Smooth brome is known to have a similar root distribution; Lamba et al (1949) found that 64% of root mass was concentrated in the top 20 cm, which increased to 75% root mass within the top 40 cm. Growth on the coke watershed covers was assumed to be similar to that of the 30 Dump site reported by Shurniak (2003). Therefore, water balance calculations for the coke watershed assumed that AET occurred in the top 30 cm of the covers, meaning that the  $\theta$  used was the weighted average of the measured volumetric moisture content of the top 30 cm of soil.

#### 5.3.1.3 Deep Percolation

The data for infiltration collected using the tank lysimeters was not reliable for making daily measurements. Deep percolation was estimated assuming that, for percolation to play a role in the water balance, the hydraulic gradients at the base of the covers had to be positive, indicating downward flow. During periods of negative gradients at the base of the cover, percolation was assumed to be zero.

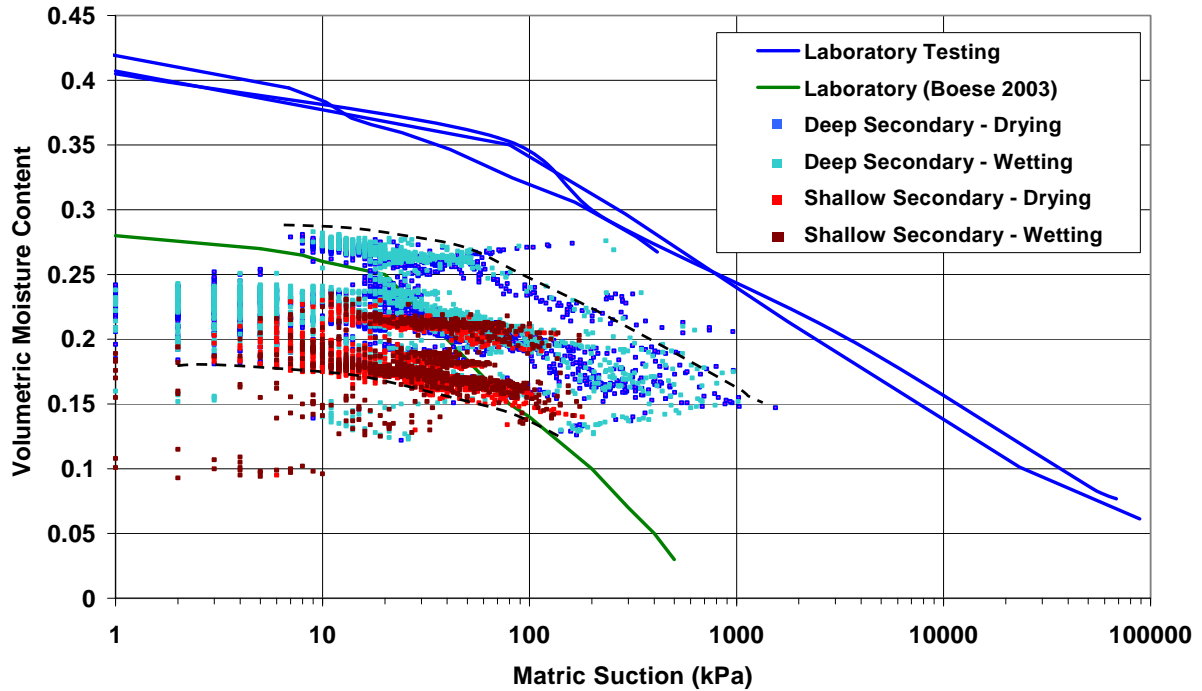
Hydraulic gradients at the base of the covers (immediately above the coke-secondary interface) are presented in Figure 5.13 and were calculated using the matric suction measured by the suction sensors during the monitoring period for 2005 and 2006. Gradients were not calculated during the period of time that the bases of the covers were frozen, that is, while the measured temperatures at the base of the cover were below zero. A positive gradient indicates a downward flux at the base of the cover. The shallow cover exhibited positive gradients at the base for only short periods during the summer of 2005, and did not have positive gradients at any time during the summer of 2006. Conversely, the deep cover exhibited positive gradients throughout the entire summer season of 2005, but only had positive gradients for short periods of time during the summer of 2006: a short period of time after spring melt; and, two brief periods after large rainfall events on July 11 and August 15 when 43.2 mm and 21.33 mm of precipitation fell, respectively. Daily precipitation is also presented in Figure 5.13; generally, periods of precipitation coincided with increase in hydraulic gradients at the base of each cover.



**Figure 5.13 Hydraulic gradient at the base of the shallow and deep covers.**

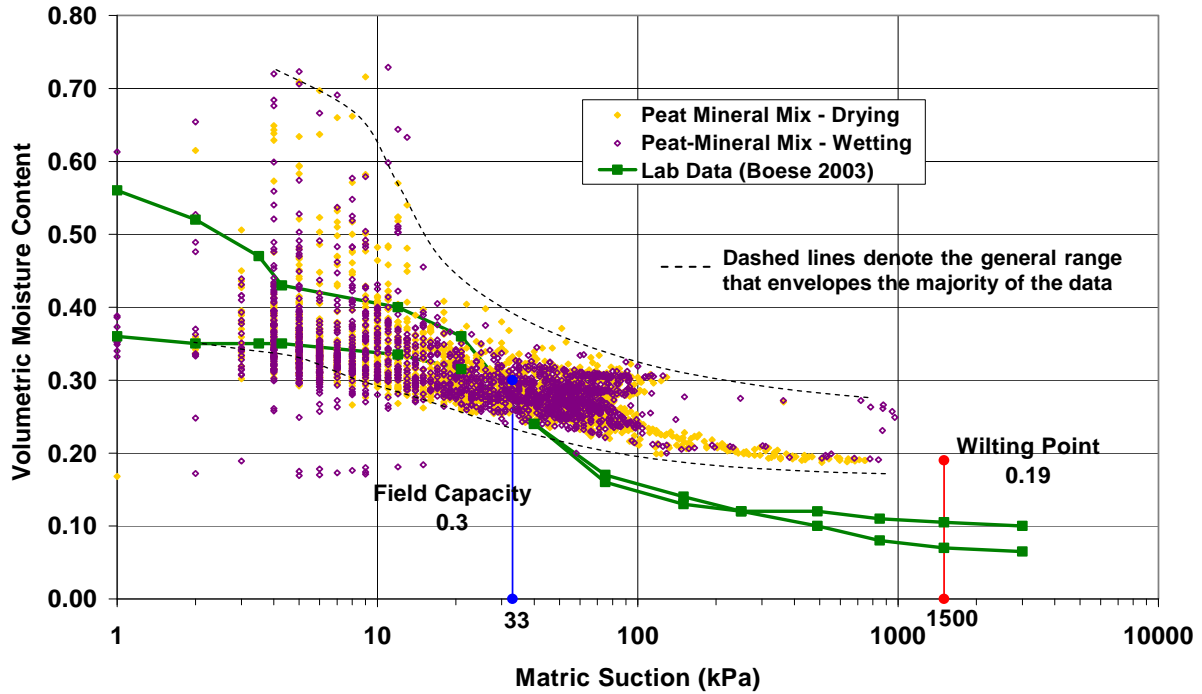
*In situ* water retention curves were developed using the field data collected by the automated soil monitoring stations. Figure 5.14 and Figure 5.15, present the *in situ* SWCCs for the secondary and peat-mineral layers, respectively. The curves were created by plotting field measured matric suction versus the corresponding soil water content. Prior to plotting, the data were separated into wetting (increasing water content) and drying (decreasing water content) trends. However, due to the scatter of the data, there was no discernable difference between the wetting data and the drying data. Laboratory measured water retention curves for the secondary placed on the coke covers (Figure 4.3) and water retention curves presented by Boese (2003) for the secondary and peat-mineral mix materials placed on the 30 Dump prototype covers are also presented for comparison. The dashed lines represent a general range that envelopes the field data. In Figure 5.14, the data presented by Boese (2003) were a better fit to the field data collected at the coke watershed. The volumetric water content for the shallow secondary was generally lower than the volumetric water contents for the deep secondary at similar suction values. The data band for the secondary has a relatively consistent width for the entire range of suctions from 1 kPa up to 1000 kPa. Based on the data in Figure 5.14, a reasonable estimate for the FC (at matric suction of 33 kPa) of the secondary would be approximately  $0.22 \text{ m}^3/\text{m}^3$ . The WP for the secondary is more difficult to estimate from the data because the upper limit of the

suctions measured is less than the wilting point of 1500 kPa. However, the lower limit of the volumetric water content within the banded data is approximately  $0.15 \text{ m}^3/\text{m}^3$ .



**Figure 5.14** *In situ* SWCC for the till secondary.

The *in situ* SWCC data for the peat-mineral layer is presented in Figure 5.15 along with laboratory data presented by Boese (2003) for the peat-mineral material used at the 30 Dump site. The dashed lines in Figure 5.15 denote the range of the data collected. Unlike the data for the secondary, the data bandwidth for the deep and the shallow peat-mineral mix layers was considerably more variable; wider at lower suction values (less than about 20 kPa) and narrower at higher suction values (20 kPa to 1000 kPa). The laboratory data from Boese (2003) fit well with the field data at lower suctions below 50 kPa and is well below the field data at higher suctions above 50kPa. Based on the field data, at higher values of matric suction up to 1000 kPa, the corresponding volumetric moisture content appears to reach a minimum of  $0.19 \text{ m}^3/\text{m}^3$ . Measured values of matric suction did not exceed the wilting point of 1500 kPa, however, extrapolating the data points in Figure 5.15, the wilting point for the peat mineral material can be estimated as  $0.19 \text{ m}^3/\text{m}^3$ .

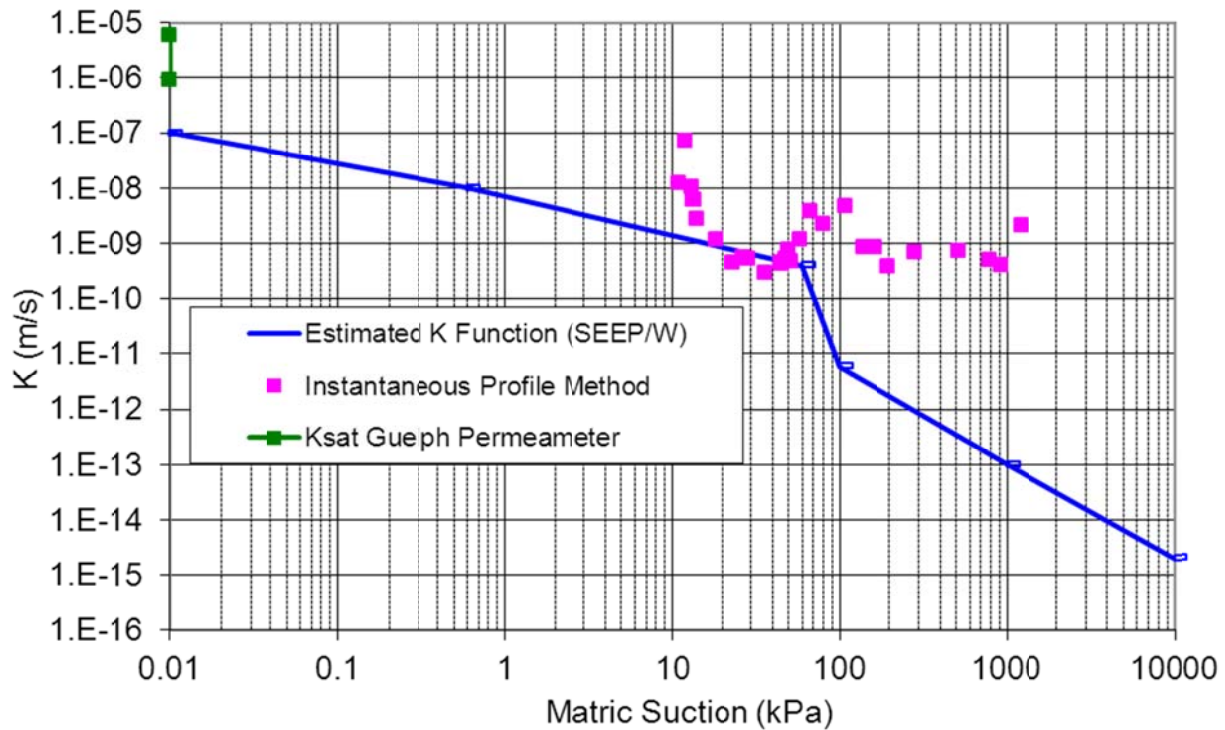


**Figure 5.15** *In situ* SWCC for the peat-mineral mix.

An instantaneous profile method (IPM) was used to estimate the hydraulic conductivity function using the field data for matric suction and the corresponding water contents measured simultaneously. Figure 5.16 presents the IPM estimated hydraulic conductivities in the secondary layer. The IPM was used to evaluate the hydraulic conductivity of the secondary over two extended dry periods during the study; September 1 to 23, 2005 and May 23 to June 17, 2006. These periods were chosen because both were preceded by a large rainfall event, allowing the soil profile to be monitored as it became wet and then drained over time. The figure also shows the saturated hydraulic conductivity measured in the secondary using a Guelph permeameter and an estimated hydraulic conductivity function that was created using the van Genuchten method in SEEP/W, a commercial software package produced by Geo-Slope International Inc. (Krahn 2004). The software has a built-in capability that estimates hydraulic conductivity functions using SWCC data. The laboratory SWCC (Figure 4.3) was used to estimate the hydraulic conductivity function in SEEP/W. The IPM-estimated hydraulic conductivities are similar to the SEEP/W estimate at suctions between 10 kPa and 100 kPa, but deviates at higher suctions and is up to 3 to 4 orders of magnitude higher at suctions between 200 kPa and 1000 kPa. However, the saturated hydraulic conductivity measured using the Guelph permeameter was also higher than the SEEP/W estimate at a matric suction of 0.01 kPa, which



essentially corresponds with the saturated hydraulic conductivity for the function. The SEEP/W estimated function was used in the water balance calculations.



**Figure 5.16 Hydraulic conductivity function for the secondary using Instantaneous Profile Method.**

#### 5.3.1.4 Runoff and Interflow

Runoff and interflow, both considered lateral flow mechanisms, were assumed to be zero for both covers. Since the covers are not completely flat, there was a possibility that during extremely large rainfall events or during spring melt water may be lost to runoff. However, the surface grade across the covers varied by less than 1%. With such a flat surface slope, runoff for the majority of the year would be negligible and it was highly unlikely that interflow would occur at measurable quantities. Research in areas with drier climates and low relief has shown that the shallow unsaturated zone soil storage and AET, both vertical water movement mechanisms, dominates over lateral flow mechanisms (Devito et al. 2005).

#### 5.3.1.5 Change in Storage

The change in water volume stored,  $\Delta S$ , in each cover was calculated daily as described in Section 5.1. The measured and calculated change in the water volume stored were then compared in determining the water balance.

### 5.3.2 Water Balance

Precipitation, AET, deep percolation and  $\Delta S$  were used to develop a 1-dimensional spreadsheet model that calculated the daily water balance for each cover for 2005 and 2006 using Equation 2 (Page 10). The field measured  $\Delta S$  was not calculated during the winter months while the covers were frozen because the sensors were not functioning properly (as expected), and trying to interpret data during this period would be misleading. Figure 5.17 to Figure 5.20 present the results of the calculated  $\Delta S$  and measured  $\Delta S$ .

AET was estimated in the spreadsheet model by manually adjusting the field capacity and wilting points ( $\theta_{WP}$  and  $\theta_{FC}$ ) of the peat-mineral mix and the secondary using Equation 13 and Equation 14 either higher or lower to best fit the calculated  $\Delta S$  and measured  $\Delta S$ . The “best fit” was determined by minimizing the residual sum of squares for the calculated and measured values of  $\Delta S$ . The percolation rates were applied at times when hydraulic gradients at the base of the covers were positive, as discussed in Section 5.3.1.3. Both the shallow and the deep covers had the same precipitation and PET (since the same climate data were used for both). The calculated  $\Delta S$  and the measured  $\Delta S$  for the shallow and deep covers for both 2005 and 2006 are presented in Figure 5.17 to Figure 5.20, respectively.

The precipitation in 2005 was above average for the region and the majority of the precipitation fell as rainfall during the summer months.

#### 5.3.2.1 Shallow Cover

The water balance for the shallow cover is shown in Figure 5.17 for 2005 and Figure 5.18 for 2006. Figure 5.3 summarizes the estimated  $\theta_{FC}$  and  $\theta_{WP}$  values and the percolation rates for the shallow cover for the 2005 and 2006 monitoring seasons. In spring 2005, there was still little to no vegetation on the shallow cover and evaporation was estimated to be 38% of PET (discussed in Section 5.3.1.2). However, by July 2005, vegetation had likely taken root and was able to access the stored moisture in the shallow cover.

For 2005, the calculated  $\Delta S$  best fit the measured  $\Delta S$  for the peat-mineral mix at values of  $\theta_{FC}$  and  $\theta_{WP}$  of  $0.35 \text{ m}^3/\text{m}^3$  and  $0.25 \text{ m}^3/\text{m}^3$ , respectively, and for the secondary at values of  $\theta_{FC}$  and  $\theta_{WP}$  of  $0.33 \text{ m}^3/\text{m}^3$  and  $0.23 \text{ m}^3/\text{m}^3$ , respectively. For 2006, the estimated values of  $\theta_{FC}$  and  $\theta_{WP}$



for the peat-mineral mix were  $0.32 \text{ m}^3/\text{m}^3$  and  $0.25 \text{ m}^3/\text{m}^3$ , respectively, and for the secondary were  $\theta_{FC}$  and  $\theta_{WP}$  of  $0.33 \text{ m}^3/\text{m}^3$  and  $0.18 \text{ m}^3/\text{m}^3$ , respectively.

**Table 5.3 - Estimated FC, WP and percolation rates for the shallow cover**

Year	Peat-Mineral Mix		Secondary		Percolation (mm/day)**
	$\theta_{FC}$ ( $\text{m}^3/\text{m}^3$ )	$\theta_{WP}$ ( $\text{m}^3/\text{m}^3$ )	$\theta_{FC}$ ( $\text{m}^3/\text{m}^3$ )	$\theta_{WP}$ ( $\text{m}^3/\text{m}^3$ )	
Apr 1 – Oct 31, 2005*	0.35	0.25	0.33	0.23	0.78
Apr 1 – Oct 4, 2006	0.32	0.25	0.33	0.18	0

\* For the period from May 1 to June 26, 2005 AET was estimated as 38% of PET.

\*\* The percolation rate noted was only applied in the water balance when gradients at the base of the cover were positive.

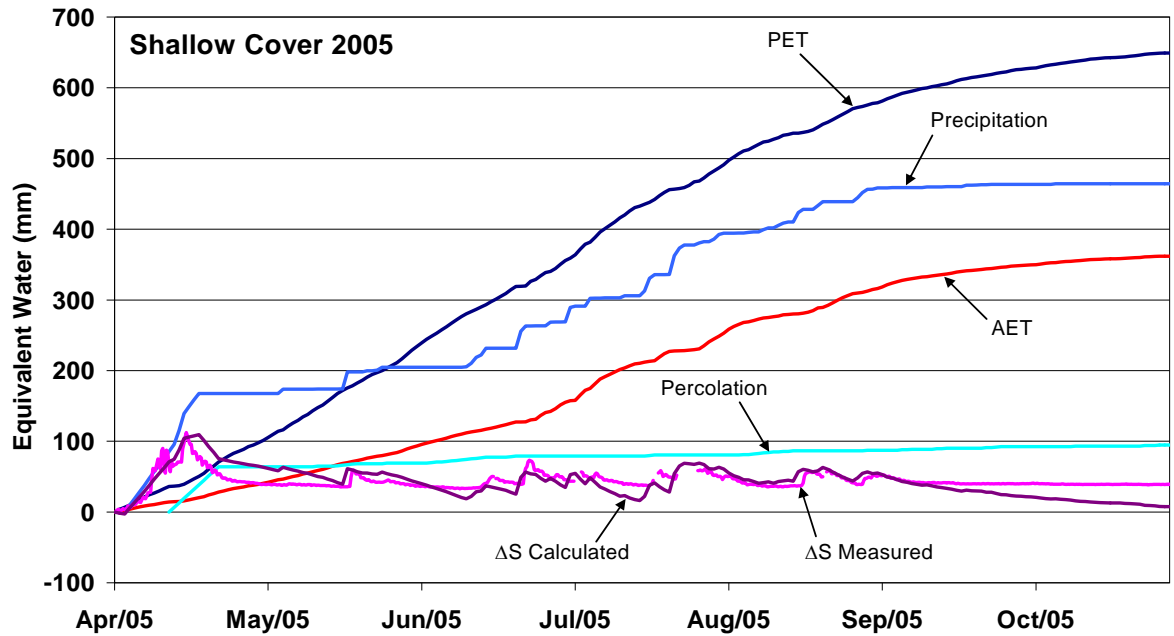
Table 5.4 summarizes the water balance components for the shallow cover. Overall 2005 was a wetter year than 2006 with almost 16% difference in precipitation. The PET calculated was nearly the same for both years with only a 2% difference.

The AET for 2006 was slightly higher than that for 2005 with a 6 mm increase, or 1.7% difference, from year to year, while the deep percolation (DP) for 2005 was significantly higher than in 2006 when DP was zero, a 95 mm decrease from year to year. The majority of this DP, approximately 75 mm or 79% occurred during the spring melt of 2005.

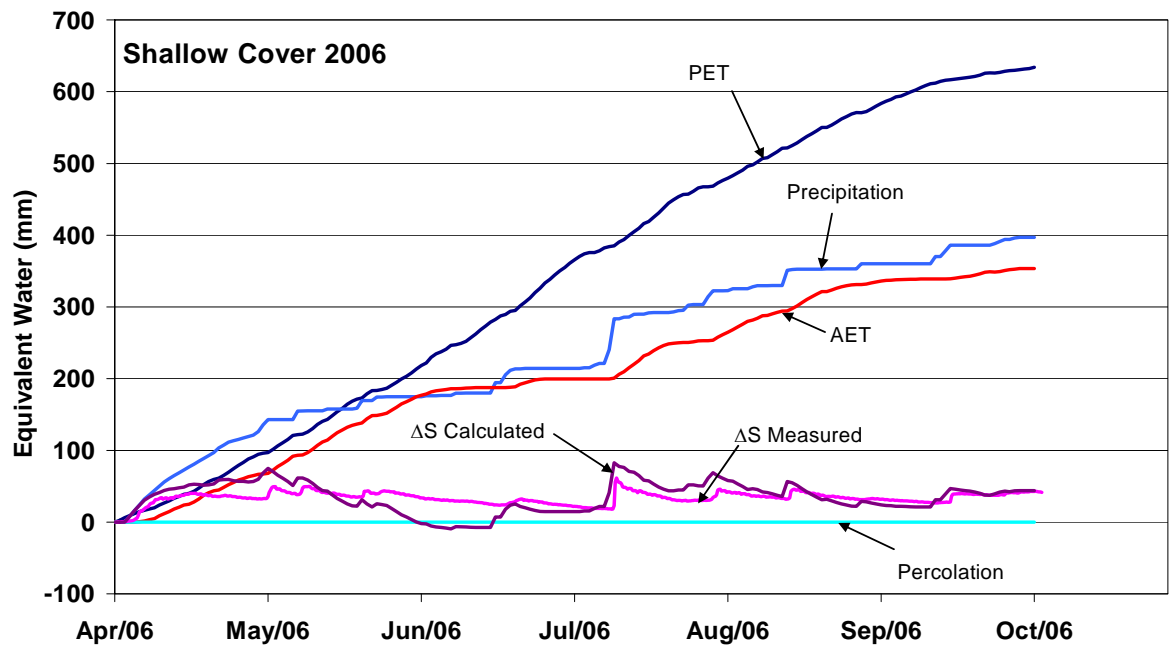
**Table 5.4 – Summary of cumulative water balance components for the shallow cover**

Component	Apr 1 – Oct 31, 2005	Apr 1 – Oct 4, 2006
PET (mm)	649	634
PPT (mm)	464	397
AET (mm)	347	353
DP (mm)	95	0
$\Delta S$ (mm)	22	44

In spring 2005, excess moisture was lost as deep percolation (Figure 5.17). Around mid-April evaporation from the bare soil reduces the rate of deep percolation. Plant growth is established in July when AET increases sharply while essentially shutting off DP. Precipitation during the summer maintains AET and deep percolation is only triggered after large rainfall events sufficient to increase the gradients at the base of the cover.



**Figure 5.17 Cumulative water balance on the shallow cover for 2005.**



**Figure 5.18 Cumulative water balance on the shallow cover for 2006.**

The calculated  $\Delta S$  and the measured  $\Delta S$  for the shallow cover (Figure 5.17 and Figure 5.18) had an overall better fit to the data in 2005 than in 2006, with an  $r^2$  value of 0.48 for 2005 compared to 0.38 for 2006. This is likely an indication that the cover properties are evolving over time in response to weathering of the covers and biophysical and chemical processes (Kelln

2008). Freeze-thaw cycles, wetting-drying cycles, continued development of root systems, and burrowing insects and animals will all affect the hydrological response of the covers. These changes in cover properties would also change the field capacity and wilting point since both are dependent on the physical properties of the soil.

#### 5.3.2.2 Deep Cover

The water balance for the deep cover is shown in Figure 5.19 for 2005 and Figure 5.20 for 2006. Table 5.5 summarizes the estimated  $\theta_{FC}$  and  $\theta_{WP}$  values and the percolation rates for the deep cover for the 2005 and 2006 monitoring seasons. Similar to the shallow cover in spring 2005, there was still little to no vegetation on the deep cover and evaporation was estimated to be 38% of PET (discussed in Section 5.3.1.2).

For 2005, the calculated  $\Delta S$  best fit the measured  $\Delta S$  for the peat-mineral mix at values of  $\theta_{FC}$  and  $\theta_{WP}$  of  $0.41 \text{ m}^3/\text{m}^3$  and  $0.24 \text{ m}^3/\text{m}^3$ , respectively, and for the secondary at values of  $\theta_{FC}$  and  $\theta_{WP}$  of  $0.31 \text{ m}^3/\text{m}^3$  and  $0.23 \text{ m}^3/\text{m}^3$ , respectively. For 2006, the estimated values of  $\theta_{FC}$  and  $\theta_{WP}$  for the peat-mineral mix were  $0.31 \text{ m}^3/\text{m}^3$  and  $0.20 \text{ m}^3/\text{m}^3$ , respectively, and for the secondary were  $\theta_{FC}$  and  $\theta_{WP}$  of  $0.31 \text{ m}^3/\text{m}^3$  and  $0.23 \text{ m}^3/\text{m}^3$ , respectively. Similar to the shallow cover, the field capacity and wilting point for the peat-mineral mix layer were lower in 2006 compared to 2005. Correspondingly, the decreases are likely due to changing hydraulic properties of the peat-mineral material in response to biophysical and chemical processes. There was no apparent change in the field capacity and wilting point in the deep cover for the secondary material. However, the relatively short time frame over which this study was conducted was likely too short to see similar changes in the deep cover secondary layer compared to those seen in the thinner shallow cover secondary. Changes to the thicker deep secondary will likely take a longer time to occur. Kelln (2008) found that the  $K_s$  of the 30 Dump D3 cover changed over a period of three to four years after cover placement, and this will likely be the case for the coke watershed covers.

**Table 5.5 Estimated AET/PET and percolation rates for the deep cover**

Year	Peat-Mineral Mix		Secondary		Percolation (mm/day)**
	$\theta_{FC}$ (m <sup>3</sup> /m <sup>3</sup> )	$\theta_{WP}$ (m <sup>3</sup> /m <sup>3</sup> )	$\theta_{FC}$ (m <sup>3</sup> /m <sup>3</sup> )	$\theta_{WP}$ (m <sup>3</sup> /m <sup>3</sup> )	
2005*	0.41	0.24	0.31	0.23	0.10
2006	0.31	0.20	0.31	0.23	0.09

\* For the period from May 1 to June 26, 2005 AET was estimated as 38% of PET.

\*\* The percolation rate noted was only applied in the water balance when gradients at the base of the cover were positive.

Table 5.6 summarizes the water balance components for the deep cover. The AET for the deep cover was estimated to be approximately 35 mm higher or 11% difference in 2005 than in 2006 at 337 mm and 302 mm, respectively. The DP for 2005, contrary to the shallow cover, was slightly higher in 2006, with an increase of 5 mm, or about 26% difference, from 2005 to 2006. The DP in 2005 appeared to be relatively consistent because the gradients at the base of the deep cover in 2005 were positive for the entire field season. This may have been due an excess of water storage in the cover from the previous fall of 2004 and a lack of a deeper rooting system in 2005, which was not able to access the stored water near the base of the cover until the vegetation was established. In 2006, 12 mm of the 22 mm total, or approximately 55%, of the DP on the deep cover occurred during the spring melt of 2005.

**Table 5.6 – Summary of water balance components for the deep cover**

Component	2005	2006
PET (mm)	649	634
PPT (mm)	464	397
AET (mm)	337	302
DP (mm)	17	22
$\Delta S$ (mm)	110	73

Lack of precipitation in September and October of 2005 appear to reduce cover water storage to residual conditions as AET and percolation shut down. This is observed on both the shallow (Figure 5.17) and deep cover (Figure 5.19).

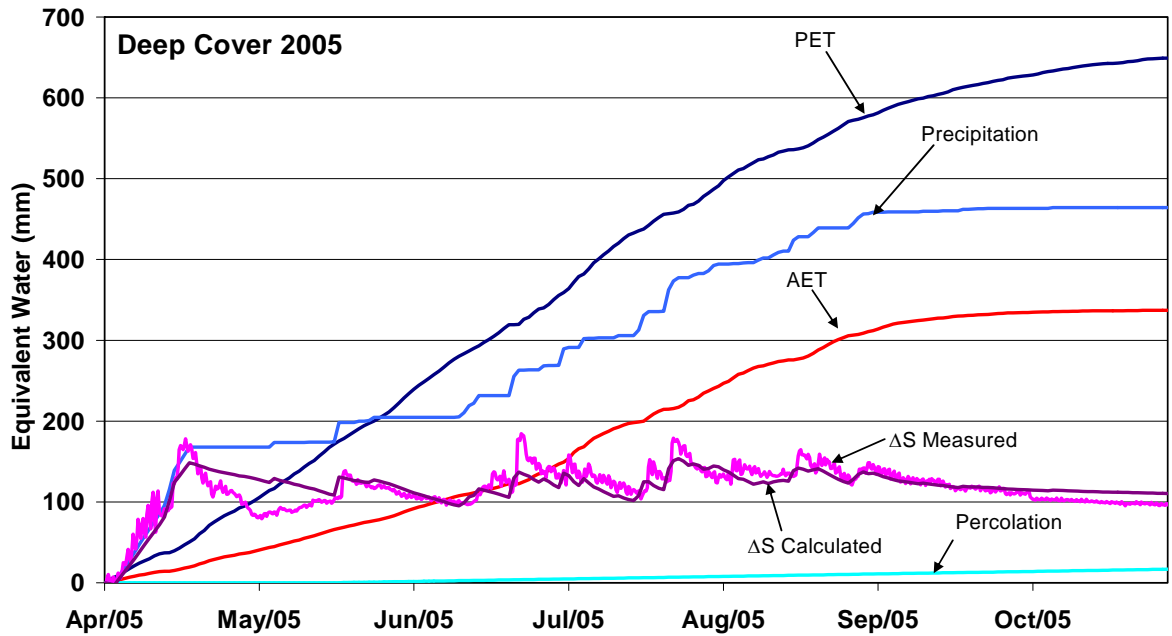


Figure 5.19 Cumulative water balance on the deep cover for 2005.

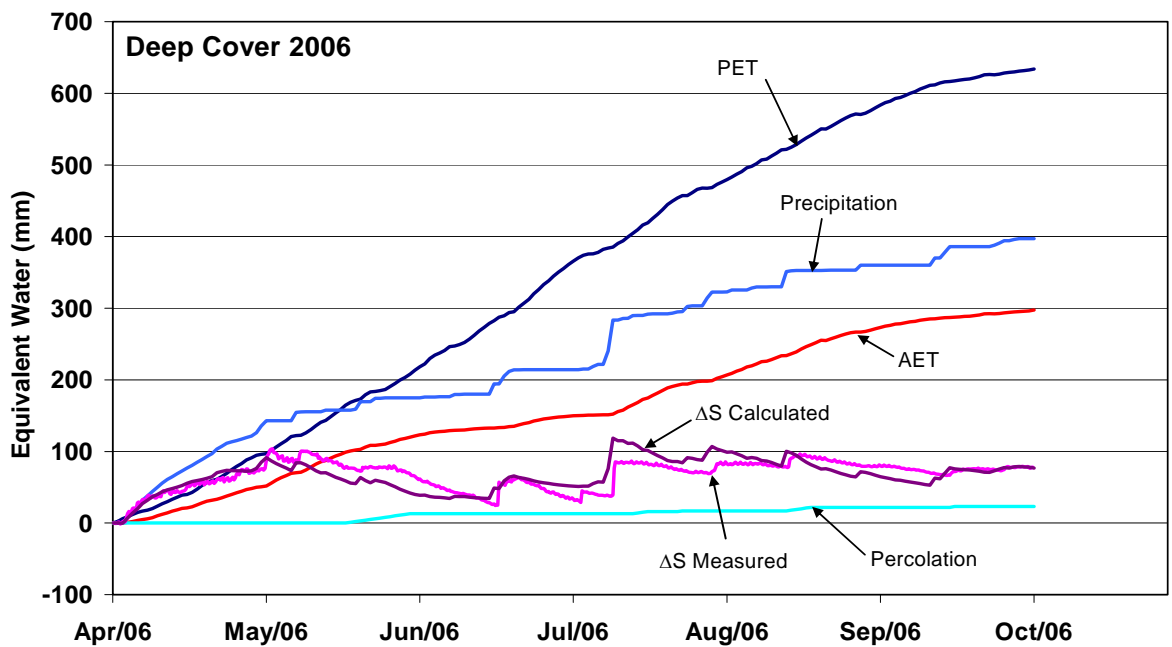


Figure 5.20 Cumulative water balance on the deep cover for 2006.

### 5.3.3 Preferential Flow

Preferential flow is flow that by-passes through the soil with increased flux through small channels or macropores in the soil (Kelln 2008), such that only a small fraction of the soil matrix participates in the transport of the water. When soil moisture at depth suddenly spikes after a

rainfall event, then preferential flow is likely occurring (Boese 2003). The soil moisture contents at each soil station were studied for a spiked moisture pattern to determine if preferential flow was occurring.

The shallow cover had three occasions where preferential flow may have occurred, including: June 22, 2005 corresponding with a 31.5 mm precipitation event; July 23, 2005 corresponding with a 41.6 mm precipitation event; and, July 10, 2006 corresponding with a 62.2 mm precipitation event. The deep cover did not show signs of preferential flow in 2005, however, the 62.2 mm precipitation event of July 10, 2006 appeared to have triggered preferential flow where moisture contents near the base of the cover spiked immediately after the precipitation event. The precipitation during that event was the largest event during the entire study period. The measured increase in moisture storage in the shallow cover was only about 37 mm (Figure 5.3) and the increase in the deep cover was about 47 mm (Figure 5.6), indicating that approximately 23 mm and 13 mm of precipitation may have bypassed the shallow and deep covers, respectively. This rainfall occurred after an extended period of dry weather when both covers were very dry.

The water contents of the coke below the covers spiked similarly to the cover material immediately after the precipitation. The underlying coke can indicate that there was a potential for preferential flow to occur for the three precipitation events mentioned above.

The existence of preferential flow can make it difficult to accurately determine the water balance.

#### **5.4 Comparison of Cover Performance**

The performance of each cover is based on the ability of the cover to supply and maintain sufficient moisture for plant growth. Of the two cover applications on the coke watershed, the deep cover showed more potential for water storage than the shallow cover. Neither cover, however, showed the ability to store water under dry conditions. The ratio of AW/AWHC (Figure 5.11) is a good indicator of a cover's performance. When the ratio approaches zero, it signifies a cover that is in extreme stress and unable to supply sufficient moisture to maintain vegetation. Both covers had ratios that dropped below zero during the study, indicating overall

poor cover performance. Table 5.7 summarizes the average deep percolation through each cover.

**Table 5.7 – Summary of deep percolation and AET**

<b>Cover</b>	<b>Apr 1 – Oct 31, 2005</b>	<b>Apr 1 – Oct 4, 2006</b>	<b>Average</b>
DP (mm)			
Shallow Cover	95	0	48
Deep Cover	17	22	19
AET (mm)			
Shallow Cover	347	353	350
Deep Cover	337	302	320

The relatively large amount of percolation that occurred through the shallow cover in 2005 would suggest that the deep cover appeared to perform better than the shallow cover in terms of moisture storage and prevention of deep percolation. However, the percolation estimates for 2006 would indicate the opposite that the shallow cover appeared to perform better. Based on inferences made about preferential flow, the shallow cover appears to be more susceptible than the deep cover. The short duration of the study made it difficult to determine trends in the percolation and preferential flow estimates, and therefore, difficult to make comparisons on the overall long-term performance of the covers.

Based on the water balance estimates for AET, the shallow cover appears to release slightly more moisture than the deep cover, on average for the period from April to October in 2005 and 2006, the difference was only 10%. This indicated that over the first two years after cover placement the covers performed similarly with respect to water storage/release.

## CHAPTER 6

### SUMMARY AND RECOMMENDATIONS

Oil sand industries producing petroleum coke face the challenge of providing environmentally sound, long-term storage of this material in the reconstructed landscape, while allowing for its later recovery as a potential future energy source.

Two instrumented watersheds were constructed at the Syncrude Mildred Lake mine site to study the performance of soil covers placed over petroleum coke. The following sections will outline the conclusions of the study in relationship to the original objectives and will provide recommendations for future study.

As outlined in Chapter 1, the objectives of this thesis were:

- Install additional instrumentation to supplement the existing instrumented field site and verify the performance of the instrumentation.
- Develop a preliminary characterization of the covers, including the measurement of various soil parameters, through interpretation of field monitoring data and laboratory testing.
- Develop a preliminary, conceptual, one-dimensional water balance for the covers.

#### **6.1 Instrumented Field Site**

The instrumentation that was installed as part of this study was intended to verify existing automated instrumentation on the coke watershed and to provide supplemental data. The instrumentation generally performed well and measured the field parameters successfully. The outcome of the evaluation of the field instrumentation and any difficulties encountered is outlined below.

- A meteorological station located at near the center of the shallow cover measured atmospheric conditions for the watershed site. The meteorological data collected was verified using regional data from the Fort McMurray airport and also to local data at the



Mildred Lake weather station. However, net radiation data were missing for a significant period in late spring from May 11 to June 20, 2005; a period of rapidly increasing daily radiation.

- Soil moisture was measured using a Diviner 2000 capacitance probe and time domain reflectometry (TDR) probes (CS616 water content reflectometers). The TDR sensors and the Diviners were laboratory calibrated and verified with field samples collected during installation. Water contents measured in the soil cover materials were adequately measured to conduct the study, meaning that there was a sufficient amount of data to make an effective interpretation of the data collected. Additional field calibration of sensors was required to ensure moisture contents are accurately measured in all soil types. The precision of the data collected by the Diviner probe and the TDR sensors appeared to be better in the peat-mineral and secondary cover material than in the underlying coke. The Diviner data were significantly lower in the coke compared to the TDR sensor data. This indicated poor contact of the probes with the surrounding soil.
- Soil temperatures were measured using strings of thermocouples and CS229 thermal conductivity sensors. The CS229 sensors were installed near the lysimeters on each cover and the thermocouples were installed at the east and west ends of each cover. The data collected using the thermocouples corresponded well to the temperature profiles measured with the CS229 sensors.
- Matric suction was measured using the CS229 thermal conductivity sensors. A QuickDraw tensiometer was used to verify the CS229 sensors. The CS229 sensors appear to be responding as they should to precipitation events. The data collected with the QuickDraw corresponded well to the data collected by the CS229 sensor in the deep cover. The data collected on the shallow cover did not correspond well. The data was re-checked, but no obvious reason was apparent for the differences on the shallow cover. This may have, however, been due to differences in time for the instruments to reach equilibrium on each cover or may have been affected by precipitation that occurred on the day that the field measurements were taken.
- Net percolation was measured using a tank lysimeter. However, for the purposes of calculating a daily water balance, the tank lysimeter did not function adequately to

evaluate the net percolation. Pumping water from the lysimeters did not give an accurate indication of the volume or the timing that the net percolation occurred through the covers.

## **6.2 Cover Characterization**

The cover characterization included both field and laboratory components. The laboratory components included the measurement of the SWCC, density, and grain-size distribution for both the secondary and the underlying coke materials. The field component included in situ nuclear densometer testing and saturated hydraulic conductivity testing using a Guelph permeameter. The results for the coke cover were in line with preliminary results for the 30 Dump site indicating that the covers on the coke watershed are following a similar evolutionary path as the covers age.

## **6.3 Cover Water Balance**

A preliminary, conceptual, one-dimensional water balance was computed for the shallow and deep covers at the coke watershed using the data collected during field monitoring. The components of the conceptual water balance included precipitation, actual evapotranspiration (AET), deep percolation and change in soil moisture ( $\Delta S$ ). Interflow and runoff were assumed to be zero for the site. General comments regarding the outcome of the water balance are highlighted below.

- AET was estimated as a percentage of potential evapotranspiration at different times during the season.
- Deep percolation was estimated as a percentage of precipitation. The tank lysimeters installed on each cover did not produce reliable data to determine daily percolation through the covers.
- Based on the deep percolation estimated from the water balance, both the shallow and deep covers performed well in limiting infiltration of water to the underlying coke. However, the covers are susceptible to severe drying and likely preferential flow during intense precipitation events, and did not perform well to retain water, which is a critical component of a reclamation cover system.

- Initial AET estimates indicated that the shallow and deep covers performed similarly with respect to storing/releasing water, with the shallow cover being able to release about 10% more than the deep cover.

#### **6.4 Preliminary Cover Performance**

The available water (AW) for the shallow and deep covers were considerably less than the AW for similar covers at the 30 Dump site. The poorer moisture retention on the coke covers was further complicated by the fact that the 30 Dump site is located on a substantial slope where surface runoff and interflow play a role in the overall water balance, which was not the case for the coke watershed.

One major difference between the two sites was the underlying material. The coke underlying the deep and shallow covers on the coke watershed has very different geotechnical properties than the shales underlying the 30 Dump covers, particularly hydraulic conductivity. The hydraulic conductivity of the coke is up to several orders of magnitude higher than the shale. Therefore, the coke watershed is more likely to be affected by being under-drained (i.e. draining from below) when the base of the covers becomes wetted. The underlying shale of the 30 Dump site created perched water conditions within the cover materials, which prevented the covers from being drained. The depth to groundwater below the coke covers (see Section 4.3.9) was well below the cover-coke interface (up to 17 m) and, in fact, the groundwater elevation decreased by as much as 1.3 m over the period of the study from 2005-2006.

The mean temperature profiles across the covers indicate elevated temperatures in the underlying tailings sand when compared to typical mean soil temperature profiles for northern regions and specifically at the 30 Dump site. This additional heat source would likely have an effect on the water dynamics of the covers and has the potential to cause evaporative water losses down into the underlying unsaturated sand tailings. Research has shown that extreme temperature differences between permeable waste (such as the sand tailings) and the air can cause thermal convection to occur (Hockley et al. 2009). During much of the year, the soil gas flow would be expected to be upward when air temperature is less than the tailings temperature. However, during the summer months, when the air temperature is higher than the tailings temperature, downward gas flows are possible. It is during these summer months that AET

demands on the covers are greatest and a downward flow of soil gas could actually cause evaporation to occur through the bottom of the covers.

These two major differences between the two sites indicate that the overall poorer performance seen at the coke watershed, with respect to water retention, is likely due to a combination of the higher conductivity coke underlying the coke watershed, and the higher temperatures of the underlying sand tailings.

In general, the deep cover performed better than the shallow cover in storing moisture for plant growth. However, neither cover demonstrated the capacity to store adequate moisture during extended dry periods.

## **6.5 Future Research**

Areas of recommended future research include the following:

- Continued monitoring of site instrumentation to study the effects of coke on the weathering of soil covers and to track the evolution of the cover soil properties over time.
- Installation of a Bowen ratio station or a surface evaporation pan to measure the AET for the covers.
- More extensive field calibration of TDR sensors and Diviner probe to more accurately measure moisture contents in the different soil materials.
- Initiate a two-dimensional model analysis of the covers to better understand the moisture fluxes.
- Verify the assumption that interflow and runoff are negligible for the calculation of the water balance.
- Determine the effects that the higher-temperature of the tailings sand will have on cover performance.
- Study the seasonal soil gas movements (up or down) through the covers due to thermal convection caused by differences between the tailings and air temperature. If downward soil gas flows are occurring, determine the magnitude of the potential evaporative water losses through the base of the covers.

## REFERENCES

- Alberta Geological Survey 2010. Alberta Oil Sands, website:  
[http://www.ags.gov.ab.ca/energy/oilsands/alberta\\_oil\\_sands.html](http://www.ags.gov.ab.ca/energy/oilsands/alberta_oil_sands.html). Accessed: December 30, 2010.
- Alberta Sustainable Resource Development 2004. Public Lands Operational Handbook. Her Majesty the Queen in Right of Alberta.
- American Society for Testing and Materials (ASTM) 1992. Standard test method for laboratory determination of water (moisture) content of soil and rock (D2216-92). *In* 1996 Annual Book of ASTM Standards Volume 4.08. Philadelphia, PA, pp. 188-191.
- American Society for Testing and Materials (ASTM) 2005. Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (ASTM D2922-05).
- Arya, L.M., and Paris, J.F. 1981. A physicoempirical model to predict the soil moisture characteristic from particle-size distribution and bulk density data. *Soil Science Society of America Journal*, **45**: 1023-1030.
- Arya, L.M., Leij, F.J., van Genuchten, M.T., and Shouse, P.J. 1999. Scaling parameter to predict the soil-water characteristic from particle-size distribution data. *Soil Science Society of America Journal*, **63**: 510-519.
- ASTM 2003. Standard test method for the determination of the soil water characteristic curve for desorption using a hanging column, pressure extractor, chilled mirror hygrometer, and/or centrifuge (D6836 - 02(2008)e1) *In* 2008 Annual Book of ASTM Standards, Vol. 4.09. ASTM, Philadelphia, Pa.
- Averjanov, S.F. 1950. About permeability of subsurface soils in case of incomplete saturation in English Collection Vol. 7, 1950 as quoted by P. Ya Palubarinova, 1962, The theory of ground water movement (English translation by I.M. Roger DeWiest, Princeton University Press, Princeton, NJ), pp. 19-21.
- Ayres, B. 1998. Field Monitoring of Soil-Atmosphere Fluxes through Uranium Mill Tailings and Natural Surface Soils at Cluff Lake, Saskatchewan. M.Sc. Thesis, University of Saskatchewan, Saskatoon, SK.
- Barbour, S.L. 1998. Nineteenth Canadian Geotechnical Colloquium: The soil-water characteristic curve: a historical perspective. *Canadian Geotechnical Journal*, **35**: 873-894.
- Barbour, S.L. 2005. Lessons from the Southwest 30 overburden hill instrumented watershed research program. Presentation given to Syncrude at the Watershed Research Team Annual Meeting on January 25, 2005, Edmonton, AB.
- Barbour, S.L., Chapman, D., Qualizza, C., Kessler, S., Boese, C., Shurniak, R.E., Meiers, G., O'Kane, M., Hendry, M.J., and Wall, S. 2004. Tracking the evolution of reclaimed landscapes through the use of instrumented watersheds – A brief history of the Syncrude Southwest 30 overburden reclamation research program. *In* Proc. Int. Instrumented Watershed Symposium (Edmonton, AB, Canada, June 22-25, 2004).

- Bauters, T.W.J., Steenhuis, T.S., DiCarlo, D.A., Nieber, J.L., Dekker, L.W., Ritsema, C.J., Parlange, J.-Y., and Haverkamp, R. 2000. Physics of water-repellent soils. *Journal of Hydrology*, **231-232**(233-243).
- Bear, J. 1975. *Dynamics of Fluids in Porous Media*. American Elsevier Publishing Company, Inc., New York.
- Bisdorff, E.B.A., Dekker, L.W., and Schouten, J.F.T. 1993. Water repellency of sieve fractions from sandy soils and relationships with organic material and soil structure. *Geoderma*, **56**.
- Boese, C. 2003. The design and installation of a field instrumentation program for the evaluation of soil-atmosphere water fluxes in a vegetated cover over saline/sodic shale overburden. M.Sc. Thesis, University of Saskatchewan, Saskatoon, SK.
- Bowen, I.S. 1926. The ratio of heat losses by conduction and by evaporation from any water surface. *Physics Review*, **27**: 779-787.
- Briggs, L.J., and Shantz, H.L. 1912. The wilting coefficient for different plants and its indirect determination. USDA Bureau of Plant Industry Bulletin 230.
- Brooks, K.N., Ffolliott, P.F., Gregersen, H.M., and DeBano, L.F. 1997. *Hydrology and the Management of Watersheds*. Iowa State University Press, Ames, IA.
- Brooks, R.H., and Corey, A.T. 1964. *Hydraulic Properties of Porous Media*, Colorado State University, Fort Collins, Colorado.
- Bussiere, M.T., Aubertin, M., and Chapuis, R. 2003. The behaviour of inclined covers used as oxygen barriers. *Canadian Geotechnical Journal*, **40**: 512-535.
- Campbell, J.D. 1973. Pore pressures and volume changes in unsaturated soils. Ph.D. thesis, University of Illinois at Urbana-Champaign, Urbana-Champaign, IL.
- Campbell Scientific Inc. 2006a. Instruction Manual: CS616 and CS625 Water Content Reflectometers.
- Campbell Scientific Inc. 2006b. Instruction Manual: 229 Heat Dissipation Matrix Water Potential Sensor.
- Childs, E.C. 1940. The use of soil moisture characteristics in soil studies. *Soil Science*, **50**: 239-252.
- Childs, E.C., and Collis-George, N. 1950. The permeability of porous material. *Proceedings of the Royal Society of London. Series A, Mathematical and Physical Sciences*: 392-405.
- Cumulative Environment Management Association 2006. *Land Capability Classification System for Forest Ecosystems in the Oil Sands*, 3rd Edition. Her Majesty the Queen in Right of Alberta.
- Davidson, J.M., Stone, L.R., Nielsen, D.R., and Larue, M.E. 1969. Field measurement and use of soil-water properties. *Water Resources Research*, **5**: 1312-1321.
- Davis, J.L., and Chudobiak, W.J. 1975. In situ meter for measuring relative permittivity of soils. Paper 75-1A, Geological Survey of Canada, pp. 75-79.

- Decagon Devices Inc. 1998-2003. WP4 Dewpoint PotentiaMeter: Operator's Manual for Models WP4 and WP4-T.
- Devito, K., Creed, I., Gan, T., Mendoza, C., Petrone, R., Silins, U., and Smerdon, B. 2005. A framework for broad-scale classification of hydrologic response units on the Boreal Plain: is topography the last thing to consider? *Hydrological Processes*, **19**: 1705-1714.
- Fenske, D.S., Barbour, S.L., and Qualizza, C. 2006. A study of the performance of a reclamation cover placed over an oilsands coke deposit. *In* Proceedings of the 59th Canadian Geotechnical Conference, Sea to Sky Geotechnique. Vancouver, BC. Canadian Geotechnical Society, pp. 818-824.
- Flerchinger, G.N., Cooley, K.R., Hanson, C.L., and Seyfried, M.S. 1998. A uniform versus an aggregated water balance of a semi-arid watershed. *Hydrological Processes*, **12**: 331-342.
- Fredlund, D.G., and Xing, A. 1994. Equations for the soil-water characteristic curve. *Canadian Geotechnical Journal*, **31**: 521-532.
- Fredlund, D.G., Xing, A., and Huang, S. 1994. Predicting the permeability function for unsaturated soils using the soil-water characteristic curve. *Canadian Geotechnical Journal*, **31**: 533-546.
- Fredlund, M.D., Fredlund, D.G., and Wilson, G.W. 1997. Prediction of the soil-water characteristic curve from grain-size distribution and volume–mass properties. *In* Proceedings of the 3rd Brazilian Symposium on Unsaturated Soils. Rio de Janeiro. April 22-25, 1997, Vol.1, pp. 13-23.
- Fredlund, M.D., Wilson, G.W., and Fredlund, D.G. 2002. Use of the grain-size distribution for estimation of the soil-water characteristic curve. *Canadian Geotechnical Journal*, **39**: 1103-1117.
- Gardner, W.R. 1958. Some steady state solutions of the unsaturated moisture flow equation with application to evaporation from a water table. *Soil Science*, **85**: 228-232.
- Ghosh, S.N., and Desai, V.R. 2006. *Environmental Hydrology and Hydraulics: Eco-technological Practices for Sustainable Development*. Science Publishers, Enfield, NH.
- Granger, R.J. 1989. Examination of the concept of potential evaporation. *Journal of Hydrology*, **111**: 9-19.
- Guber, A., Pachepsky, Y., E., S., and W.J., R. 2004. Soil aggregates and water retention. *In*: Development of Pedotransfer Functions in Soil Hydrology (Eds Y. Pachepsky, W.J. Rawls), Elsevier.
- Heath, R.C. 1983. United States Geological Survey Water-Supply Paper 2220: Basic groundwater hydrology. United States Government Printing Office.
- Hockley, D., Kuit, W., and Phillip, M. 2009. Sullivan mine fatalities: key conclusions and implications for other sites. *In* Securing the Future and 8th Icard. Skelleftea, Sweden. June 23-26, 2009.
- Holtz, R.D., and Kovacs, W.D. 1981. *Introduction to Geotechnical Engineering*. Prentice-Hall Publishers, Englewood Cliffs, NJ.

- Hvorslev 1951. Time lag and soil permeability in ground water observations. Bulletin No. 36, US Army Corps of Engineers, p. 50.
- Israelson, O.W., and West, F.L. 1922. Water holding capacity of irrigated soils. Utah State Agricultural Experiment Station Bulletin, **183**: 1-24.
- Kelln, C. 2008. The effects of meso-scale topography on the performance of engineered soil covers. Ph.D Thesis, University of Saskatchewan, Saskatoon, Saskatchewan.
- Kelln, C.J., Barbour, S.L., Elshorbagy, A., and Qualizza, C. 2006. Long-term performance of a reclamation cover: the evolution of hydraulic properties and hydrologic response. *In* Proceedings of the Fourth International Conference on Unsaturated Soils. *Edited by* G.A. Miller, C.E. Zapata, S.L. Houston, and D.G. Fredlund. Carefree, AZ. American Society of Civil Engineers, Vol.1, pp. 813-824.
- Keshta, N., Elshorbagy, A., and Barbour, L. 2010. Comparative probabilistic assessment of the hydrological performance of reconstructed and natural watersheds. *Hydrological Processes*, **24**: 1333-1342.
- Krahn, J. 2004. Seepage Modeling with SEEP/W: An Engineering Methodology. GEO-SLOPE International Ltd., Calgary, AB.
- Krisdani, H., Rahardjo, H., and Leong, E.-C. 2009. Use of instantaneous profile and statistical methods to determine permeability functions of unsaturated soils. *Canadian Geotechnical Journal*, **46**: 869-874.
- Lamba, P.S., Ahlgren, H.L., and Mackenirn, R.J. 1949. Root growth of alfalfa, medium red clover, brome grass and timothy under various soil conditions. *Agronomy Journal*, **41**: 451-458.
- Ley, T.W., Stevens, R.G., Topielec, R.R., and Neibling, W.H. 1994. Soil Water Monitoring and Soil Measurement. Pacific Northwest Extension Publications, Pacific Northwest Bulletin No. 475.
- Macyk, T., Barbour, S.L., Chanasyk, D., Leskiw, L., O'Kane, M., and Qualizza, C. 2006. Phase 1: Soil capping technology transfer. Draft Report 2006.
- Mandziak, T. 1991. Development of a matric suction sensor. M.Sc. Thesis, University of Saskatchewan, Saskatoon, SK.
- Mather, J.R., and Thornthwaite, C.W. 1955. The water balance. *Publications in Climatology*, **8**: 1-84.
- McKenna, G.T. 2002. Sustainable mine reclamation and landscape engineering. Ph.D. Thesis, University of Alberta, Edmonton, AB.
- McNaught, A.D., and Wilkinson, A. 1998. Petroleum coke. In IUPAC Compendium of Chemical Terminology, Electronic version. Royal Society of Chemistry, 2003. Accessed on April 30, 2007.
- Meiers, G.P. 2002. The use of field measurements of hydraulic conductivity to characterize the performance of reclamation soil covers with time. M.Eng. Thesis, University of Saskatchewan, Saskatoon, Saskatchewan.



- Moskal, T.D. 1999. Moisture characteristics of coarse textured soils and peat:mineral mixes. M.Sc. Thesis, University of Alberta, Edmonton, AB.
- Nagpal, N.K., and de Vries, J. 1976. An evaluation of the instantaneous profile method for in situ determination of hydrologic properties of layered soil. *Canadian Journal of Soil Science*, **56**: 453-461.
- O'Kane Consultants Inc. 2004. As-built report for the meteorological station and net percolation monitoring system installed at the Mildred Lake coke watershed, prepared for Syncrude Canada Ltd.
- O'Kane, M. 1995. Instrumentation and monitoring of an engineered soil cover system of acid generating mine waste. M.Sc. Thesis, University of Saskatchewan, Saskatoon, SK.
- O'Kane, M., Wilson, G.W., and Barbour, S.L. 1998. Instrumentation and monitoring of an engineered soil cover system for mine waste rock. *Canadian Geotechnical Journal*, **35**: 828-846.
- Parasuraman, K., Elshorbagy, A., and Carey, K. 2007. Modelling the dynamics of the evapotranspiration process using genetic programming. *Hydrological Sciences Journal*, **52**(3): 563–578.
- Penman, H.L. 1948. Natural evapotranspiration from open water, bare soil and grass. *Proceedings of the Royal Society of London, Series A*, **193**: 120-146.
- Pomeroy, J.W., and Gray, D.M. 1995. Snowcover: Accumulation, Relocation and Management. National Hydrology Research Institute, Saskatoon, SK.
- Porebska, D., Slawinski, C., Lamorski, K., and Walczak, R.T. 2006. Relationship between van Genuchten's parameters of the retention curve equation and physical properties of soil solid phase. *International Agrophysics*, **20**: 153-159.
- Price, A. 2005. Evaluation of groundwater flow and salt transport within an undrained tailings sand dam. M.Sc. Thesis, University of Alberta, Edmonton, Alberta.
- Priyashantha, K.R.S., and Barbour, S.L. 2007. Progress Report: Coke instrumented watershed research study, report submitted to Suncor Energy Inc., Department of Civil and Geological Engineering, University of Saskatchewan, Saskatoon, SK.
- Qualizza, C., Chapman, D., Barbour, S.L., and Purdy, B. 2004. Reclamation research at Syncrude Canada's mining operation in Alberta's Athabasca oil sands region. *In* Proceedings of the 16th International Conference, Society of Ecological Restoration. Victoria, BC 24-26 August, 2005.
- Rasmuson, A., and Erikson, J.C. 1986. Capillary barriers in covers for mine tailings dumps. Report 3307, The National Swedish Environmental Protection Board.
- Ratliff, L.F., Ritchie, J.T., and Cassel, D.K. 1983. Field measured limits of soil water availability as related to laboratory measured properties. *Soil Science Society of America Journal*, **47**(4): 770-775.
- Reynolds, W.D. 1993. Saturated hydraulic conductivity field measurements, in M. R. Carter, ed. *Soil Sampling and Methods of analysis*. Canadian Society of Soil Science, **56**: 599-605.

- Richards, L.A. 1931. Capillary conduction of liquids through porous medium. *Physics*, **1**: 318-333.
- Rijtema, P.E. 1965. An analysis of actual evapotranspiration. *Agricultural Research Reports (Wageningen)* No. 659.
- Ross, B. 1990. The diversion capacity of capillary barriers. *Water Resources Research*, **26**(10): 2625-2629.
- Rutten, K. 2006. Long-term Controls in a Groundwater Flow System. M.Eng. Thesis, University of Saskatchewan, Saskatoon, Saskatchewan.
- Scott, A.C., and Fedorak, P.M. 2004. Petroleum Coking: A Review of Coking Processes and the Characteristics, Stability and Environmental Aspects of Coke Produced by the Oil Sands Companies, report submitted to Suncor Energy Inc., Syncrude Canada Ltd. and Canadian Natural Resources Ltd., Department of Biological Sciences, University of Alberta, Edmonton, AB.
- Sentek Environmental Technologies 1997. Sentek EnviroSCAN Hardware Manual Version 3.0. Sentek Pty Ltd.
- Sentek Environmental Technologies 1999. Sentek Diviner 2000 User Guide Version 1.0. Sentek Pty Ltd.
- Shurniak, R.E. 2003. Predictive Modeling of Moisture Movement within Soil Cover Systems for Saline/Sodic Overburden Piles. M.Sc. Thesis, University of Saskatchewan, Saskatoon, SK.
- Sophocleous, M.A. 2004. Ground-water recharge and water budgets of the Kansas High Plains and related aquifers. *Kansas Geological Survey Bulletin*, **249**: 18-21.
- Spaans, E.J.A., and Baker, J.M. 1995. Examining the use of time domain reflectometry for measuring liquid water content in frozen soil. *Water Resources Research*, **31**(21): 2917-2925.
- Strahler, A.N., and Strahler, A.H. 1983. *Modern Physical Geography*. Joh Wiley & Sons, New York, NY.
- Strunk, R. 2009. An evaluation of the performance of prototype instrumented soil covers at the Regina municipal landfill. M.Sc. Thesis, University of Saskatchewan, Saskatoon, SK.
- Tami, D., Rahardjo, H., Leong, E.-C., and Fredlund, D.G. 2004. Design and laboratory verification of a physical model of sloping capillary barrier. *Canadian Geotechnical Journal*, **41**: 814-830.
- Thornthwaite, C.W. 1940. *Transactions of the American Geophysical Union*, **26**: 683-693.
- Tukey, J.W. 1977. *Exploratory Data Analysis*. Addison-Wesley, Reading, MA.
- Tyler, S.W., and Wheatcraft, S.W. 1989. Application of fractal mathematics to soil water retention estimations. *Soil Science Society of America Journal*, **53**(4): 987-996.
- van Genuchten, M.T. 1980. A closed-form equation for predicting the hydraulic conductivity of unsaturated soils. *Soil Science Society of America Journal*, **44**: 892-898.

- van Rees, K., and Jackson, D. 2002. Root Distributions for Vegetation Growing on the SW30 Overburden Hill and Jack Pine Growing by Bill's Pond. A report prepared for Syncrude Canada Ltd.
- Veihmeyer, F.J., and Hendrickson, A.H. 1928. Soil moisture at permanent wilting of plants. *Plant Physiology*, **3**: 355-357.
- Veihmeyer, F.J., and Hendrickson, A.H. 1931. The moisture equivalent as a field capacity of soils. *Soil Science*, **32**: 181-193.
- Watson, K.K. 1966. An instantaneous profile method for determining the hydraulic conductivity of unsaturated porous materials. *Water Resources Research*, **2**(4): 709-715.
- Wind, G.P. 1955. Field experiment concerning capillary rise of moisture in heavy clay soil. *Netherlands Journal of Agricultural Science*, **3**: 60-69.
- Yanful, E.K. 1993. Construction and monitoring of a composite soil cover on an experimental waste-rock pile near Newcastle, New Brunswick, Canada. *Canadian Geotechnical Journal*, **30**: 588-599.

APPENDIX A  
AS-BUILT REPORTS

***As-Built Report***  
**for the**  
**Meteorological Station and**  
**Net Percolation Monitoring System**  
**Installed at the**  
**Mildred Lake Coke Watershed**



Prepared for:

**Syncrude Canada Ltd.**

Prepared by:

  
**O'Kane  
Consultants Inc.**  
*Integrated Geotechnical Engineering Services  
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Report No. 690/4-01

*December 2004*

*As-Built Report*  
for the  
Meteorological Station and  
Net Percolation Monitoring System  
Installed at the Mildred Lake Coke Watershed

*Report No. 690/4-01*

**Prepared for:**



**Prepared by:**



**December 2004**

## EXECUTIVE SUMMARY

Automated and manual water balance monitoring systems were installed on the Mildred Lake Coke Watershed in September 2003. This installation was the first stage of a two-stage installation that was completed in August 2004. The instrumentation installed in 2004 consisted of two soil monitoring stations to complete the automated water balance monitoring system. Separate as-built reports will be provided for the soil monitoring stations.

The specific objectives of this project are:

- 1) to design a tank lysimeter for measurement of representative net percolation rates through the test cover systems;
- 2) to install instrumentation for monitoring various parameters to obtain a water balance for the test cover systems;
- 3) to install instrumentation for monitoring *in situ* temperatures and O<sub>2</sub>/CO<sub>2</sub> gas concentrations with the Coke and test cover materials; and
- 4) to collect data on *in situ* moisture and density conditions of the cover and waste materials at the test cover site.

The specific objectives of this project were achieved. Net percolation is monitored by two tank lysimeters installed to a depth of 2.5 m into the Coke profile under each of the two test covers. The tank lysimeters require manual measurements to record the net percolation and gas concentrations. Precipitation (rainfall and snowfall) as well as various other climatic parameters are recorded by a fully automated meteorological station. These parameters are required for calculating potential evaporation and conducting field response numerical modelling. The meteorological station is connected to an automated data acquisition system powered by a solar panel / rechargeable battery source.

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## 1 INTRODUCTION

Syncrude Canada Ltd. (SCL) requires field information on the performance of cover systems constructed over waste materials at the Mildred Lake Coke storage facility. Two different cover treatments for the purpose of reclamation are being evaluated at this waste storage facility; one test cover consists of 35 cm of till/secondary material overlain by 15 cm of peat (hereinafter referred to as the “thin” test cover), while the second one consists of 80 cm of till/secondary material overlain by 15 cm of peat (hereinafter referred to as the “thick” test cover).

O’Kane Consultants Inc. (OKC) were retained by SCL to install automated water balance monitoring systems in the summer of 2003 at the test cover site. A meteorological station and two net percolation monitoring systems (tank lysimeters) were installed in the fall of 2003 prior to cover material placement. Automated stations to monitor *in situ* moisture and temperature conditions in the cover / waste material profile were installed in August 2004.

This report provides the as-built details for the meteorological station and net percolation monitoring systems installed in 2003. In general, these monitoring sites were instrumented as described in OKC’s proposals to SCL (OKC, 2003a and b).

### 1.1 *Project Objectives and Scope*

The overall objective of this project is to obtain field data on the performance of the two test cover systems for the Mildred Lake Coke storage facility. Monitoring the field performance of the cover systems for a minimum of one year will enable the short-term performance of the cover systems to be evaluated in response to varying site climatic conditions. The collection of accurate and reasonable field performance data, such as meteorological data, net percolation rates, and *in situ* gas concentrations and moisture conditions within the cover and waste materials, will facilitate the calibration and subsequent validation of numerical models used for cover system design.

The specific objectives of this project are:

- 1) to design a tank lysimeter for measurement of representative net percolation rates through the test cover systems;
- 2) to install instrumentation for monitoring various parameters to obtain a water balance for the test cover systems;
- 3) to install instrumentation for monitoring *in situ* temperatures and O<sub>2</sub>/CO<sub>2</sub> gas concentrations with the Coke and test cover materials; and
- 4) to collect data on *in situ* moisture and density conditions of the cover and waste materials at the test cover site.

The scope of this project in terms of OKC's involvement consisted of completing various tasks related to meeting the above objectives. OKC procured all the instrumentation associated with the net percolation monitoring system, while SCL procured all the equipment for the meteorological and soil stations. SCL was also responsible for supervising the construction of the test cover systems.

## **1.2 Organization of Report**

Section 2 of this report describes the installation of the two tank lysimeters at the Mildred Lake Coke monitoring site. Section 3 of this report describes the installation of the automated meteorological system at the Mildred Lake Coke monitoring site.

Appendix A provides technical drawings of the instrumentation and Appendix B contains a photo log of the installation.

## **2 DESIGN AND INSTALLATION OF TANK LYSIMETERS**

### **2.1 *Design of Tank Lysimeters***

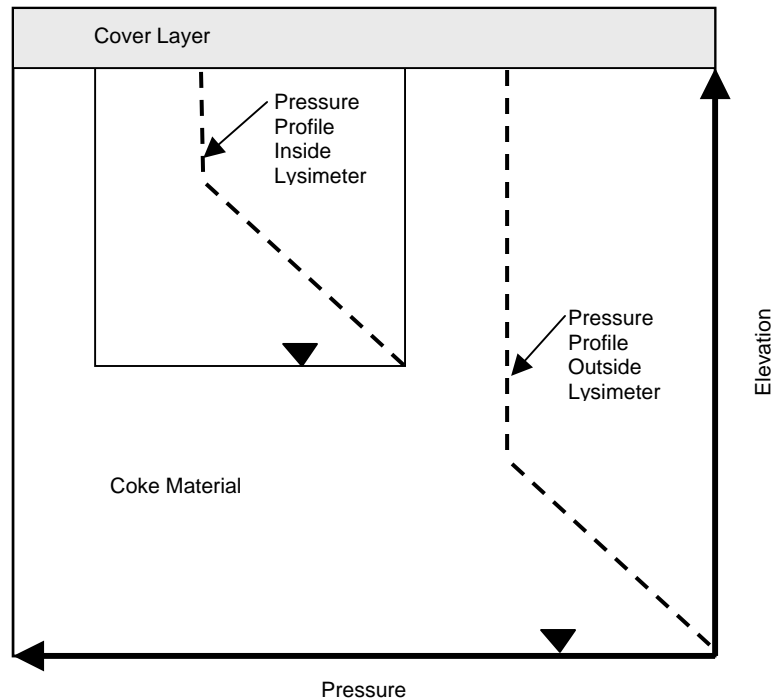
In general, the design and installation of lysimeters to monitor evaporative fluxes as well as net infiltration is well understood and implemented in the soil science discipline. However, the design of lysimeters for cover system monitoring programs in the mining industry has typically not included fundamental lysimeter design aspects established in the soil science discipline. As a result, a numerical analysis was carried out to aid in the design of the field lysimeters for this study.

This section outlines the criteria for designing a lysimeter, the numerical analysis, and describes the recommended tank lysimeter design.

#### **2.1.1 *Design Criteria***

The first criterion in the design of a lysimeter is to ensure that the pressure head profile within the lysimeter corresponds to the pressure head profile outside of the lysimeter. This design factor ensures that bypass flow around the lysimeter is minimized as a result of a difference in the pressure head profiles inside and outside the lysimeter. That is, infiltration has a tendency to flow in the direction of decreased pressure head. Thus, if the pressure head inside the lysimeter is higher than outside the lysimeter, at the same elevation, the pore water will tend to flow around rather than into the lysimeter.

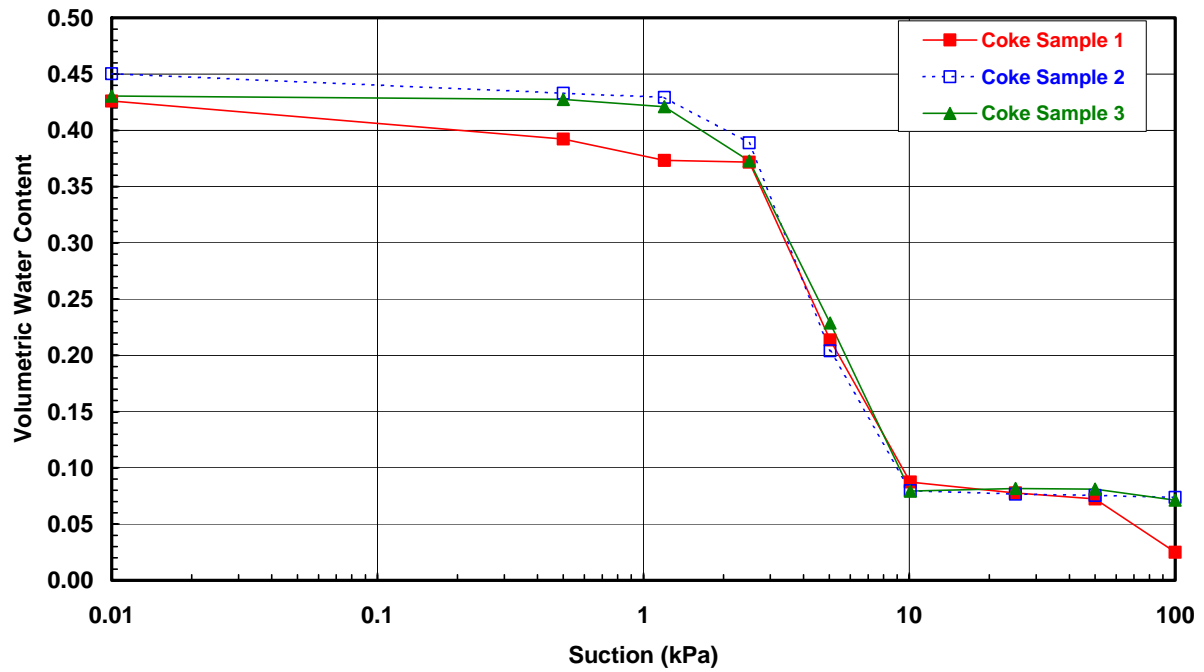
The second criterion for the design of a lysimeter is to ensure that the hydraulic gradient profile within the lysimeter corresponds to the gradient profile outside of the lysimeter. The pressure head is shown with elevation in Figure 2.1 to illustrate the gradient both inside and outside of the lysimeter. A properly designed lysimeter should create a gradient profile of approximately 1.0 through the material inside and outside the lysimeter under conditions of steady-state infiltration. The pressure head profile has a linear distribution with depth if the flux at the surface is zero. Curvature of the pressure head profile occurs under steady-state infiltration through the cover and into the waste material because water infiltrates into the ground causing a decrease in the suction near the surface. The change in pressure head near the surface is approximately zero as a result, due to the vertical shape of the pressure head profile under steady-state infiltration. The change in total head will be a function of the change in depth under these conditions because the change in pressure head is zero near the surface. The gradient will be equal to one because the gradient is calculated as a change in total head over a change in flow length and the change in head and flow length are both a function of depth.



**Figure 2.1** Pressure head profiles for the lysimeter compared to the *in situ* material (adapted from O’Kane and Barbour, 2003).

### 2.1.2 Numerical Analysis

A numerical analysis was completed to determine the optimum depth of the lysimeter over a range of potential net percolation conditions. The numerical analysis was based on determining the depth of lysimeter required to ensure that the pressure head at the top of the lysimeter tank was the same as the surrounding material to prevent water from bypassing around, or preferentially flowing into, the lysimeter. To calculate the pressure head for various percolation rates, the soil-water characteristic curve and the saturated hydraulic conductivity of the Coke and cover materials were required. Using the soil-water characteristic curve and the saturated hydraulic conductivity, it was possible to estimate the hydraulic conductivity function using the method of Fredlund and Xing (1994). The measured soil-water characteristic curve of the Coke is presented in Figure 2.2, the measured saturated hydraulic conductivity values are presented in Table 2.1, and the estimated hydraulic conductivity function is presented in Figure 2.3.

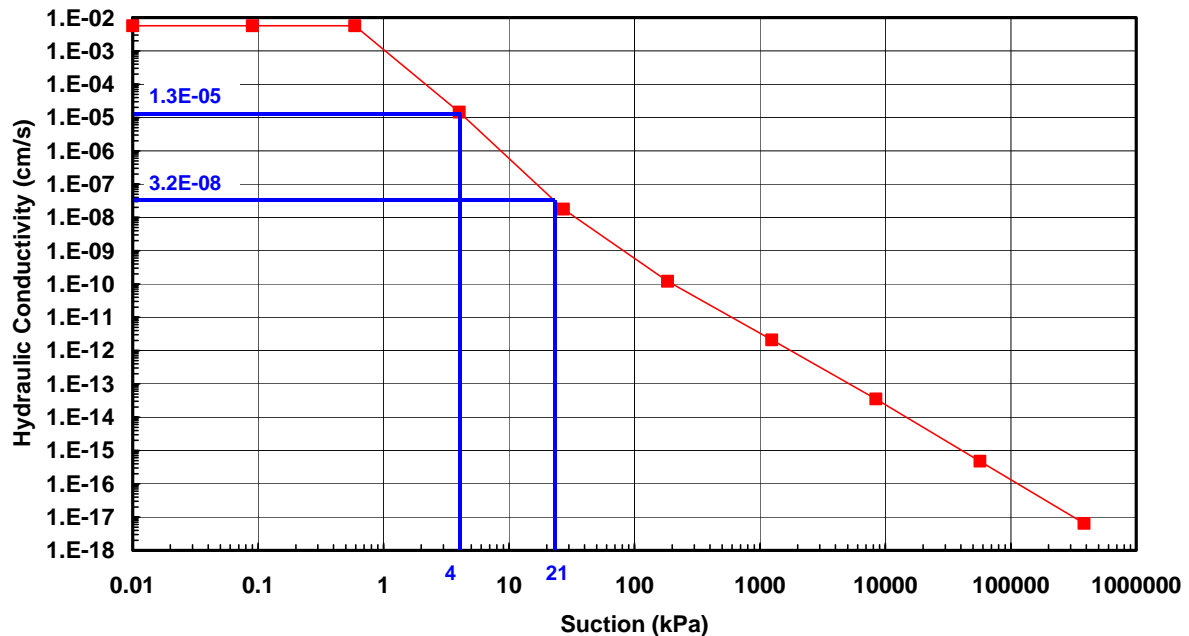


**Figure 2.2** Soil-water characteristic curve for the Syncrude Coke material.

**Table 2.1**

Measured saturated hydraulic conductivity (cm/s) for the Syncrude Coke material.

	Coke Sample 1	Coke Sample 2	Coke Sample 3
	7.85E-03	8.26E-03	1.96E-03
	7.99E-03	6.21E-03	2.43E-03
	8.08E-03	5.75E-03	2.98E-03
		5.77E-03	
<b>Average:</b>	<b>7.97E-03</b>	<b>6.74E-03</b>	<b>2.46E-03</b>



**Figure 2.3** Estimated hydraulic conductivity function for the Syncrude Coke material using the program SoilCover.

A range of percolation rates was used in the analysis to represent the maximum and minimum percolation rates that might occur at the Coke watershed. The maximum percolation rate was assumed to be the saturated hydraulic conductivity of the till/secondary cover material ( $1.3 \times 10^{-5}$  cm/s), because this is the maximum rate at which the cover can transport water. The minimum percolation rate was calculated assuming that 2% of precipitation would infiltrate through the cover, assuming annual precipitation of approximately 500 mm; this equates to a percolation rate is of  $3.2 \times 10^{-8}$  cm/s.

The vertical portion of the pressure head profile (Figure 2.1) occurs when the hydraulic gradient is equal to 1.0. Using Darcy's Law for flow:

$$q = -ki$$

where  $q$  is the flow rate (cm/s),  $k$  is the hydraulic conductivity (cm/s), and  $i$  is the hydraulic gradient, it can be seen that if  $i$  is equal to 1.0, then  $q$  is equal to  $-k$ . Therefore, when the pressure head profile is vertical, the hydraulic conductivity is equal to the flow rate (net percolation rate). This allows the suction to be estimated at the point at which the pressure head profile is vertical by using the hydraulic conductivity function, as illustrated in Figure 2.3. The net percolation (or flow) rate is found on the y-axis and, from the curve, suction can be estimated. For the maximum net percolation rate ( $1.3 \times 10^{-5}$  cm/s), the suction condition is equivalent to 4 kPa. For the minimum net percolation rate ( $3.2 \times 10^{-8}$  cm/s), the suction condition is equivalent to 21 kPa. Below the vertical portion of the pressure head profile, the pressure head follows the hydrostatic line. At hydrostatic conditions, the

pressure head is equal to the elevation head. By converting the suction to a pressure head, the equivalent elevation head can be determined using the following equation:

$$h_z = h_p = \frac{\psi_m}{\rho g}$$

where  $h_z$  is elevation head (m),  $h_p$  is pressure head (m),  $\psi_m$  is matric suction (Pa),  $\rho$  is the density of water ( $\text{kg/m}^3$ ), and  $g$  is acceleration due to gravity ( $\text{m/s}^2$ ). For example, a suction of 5 kPa is equivalent to approximately 0.5 m of pressure head, and therefore equivalent to 0.5 m of elevation head. Knowing the elevation head allows the location of the break to be determined, which in this case would be 0.5 m above the water table. Using the maximum percolation rate example, the break in the lysimeter tank would occur 0.5 m above the base of the tank. Therefore, to ensure that the pressure head profile is vertical at the top of the tank, the tank must be deeper than 0.5 m. For the minimum percolation rate ( $3.2 \times 10^{-8} \text{ cm/s}$ ), where the suction condition is 21 kPa, the break would occur 2.1 m above the water table.

### 2.1.3 Recommended Tank Lysimeter Design

A depth of 2.5 m was chosen as reasonable for the lysimeter tanks for the Coke material. This depth was chosen to ensure that the pressure head profile is vertical at the top of the tank regardless of the net percolation rate. Extra height was allowed so that if ponding of water occurs in the base of the tank, the location of the break in the pressure head profile will not rise above the top of the tank. The maximum depth of water that should be allowed to collect in the bottom of the Coke lysimeter tanks is 25 cm.

The tank chosen for installation was 2.5 m deep and 2.44 m in diameter. The large diameter is beneficial so that the backfill material can be placed and compacted to a condition as close as possible to the *in situ* material. Although less important in the relatively homogeneous Coke material, a large diameter also allows a greater sample of material to be placed in the tank, thus allowing for some heterogeneity in material as might be encountered outside of the tank.

## 2.2 Installation of Tank Lysimeters

Two net percolation collection and monitoring systems (i.e. tank lysimeters) were installed at the Mildred Lake Coke monitoring site, as illustrated on Dwg. No. 690/4-001, for monitoring the quantity and quality of percolating water through the two cover system field trials. The design of these monitoring systems was based on the results of numerical analysis, as outlined in Section 2.1. Each system is comprised of the following components:

- Net percolation collection tank;
- *In situ* moisture and gas monitoring; and



- Piezometer for water level measurement, sample collection, and water removal.

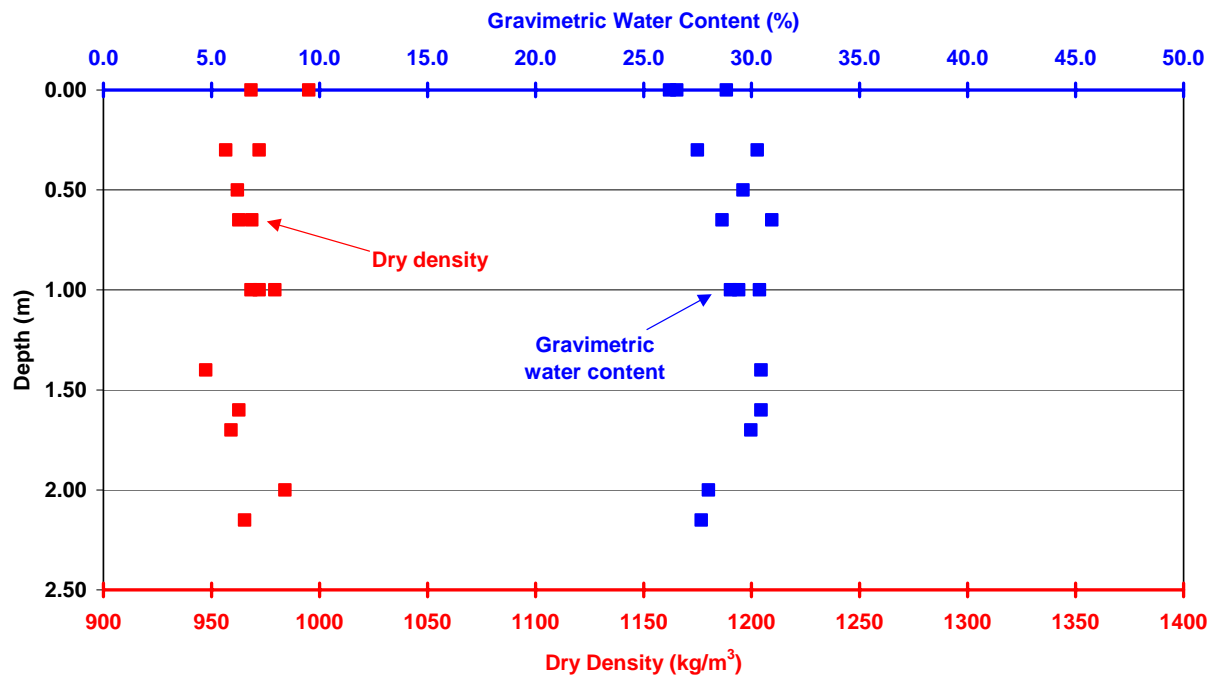
Dwg. No. 690/4-002 identifies each of these components for the lysimeters installed under both the thin and thick test covers. The procedures used to install the components are described below.

The net percolation collection tank, which is the main component of the lysimeter, consists of a circular storage tank that would typically be used in the agricultural industry for storing irrigation water. These prefabricated plastic tanks, which have a diameter of 2.44 m and a height ranging from 2.5 m to 3.0 m, were shipped to the SCL site and modified by local contractors to meet the requirements for a net percolation collection tank. This involved removing the top dome-shaped portion of the tank to allow material to be placed inside the tank and potential percolating water to flow into the collection tank. Four handles were also attached to the walls of the tank to facilitate transportation of the tank using a backhoe (Photo B.1).

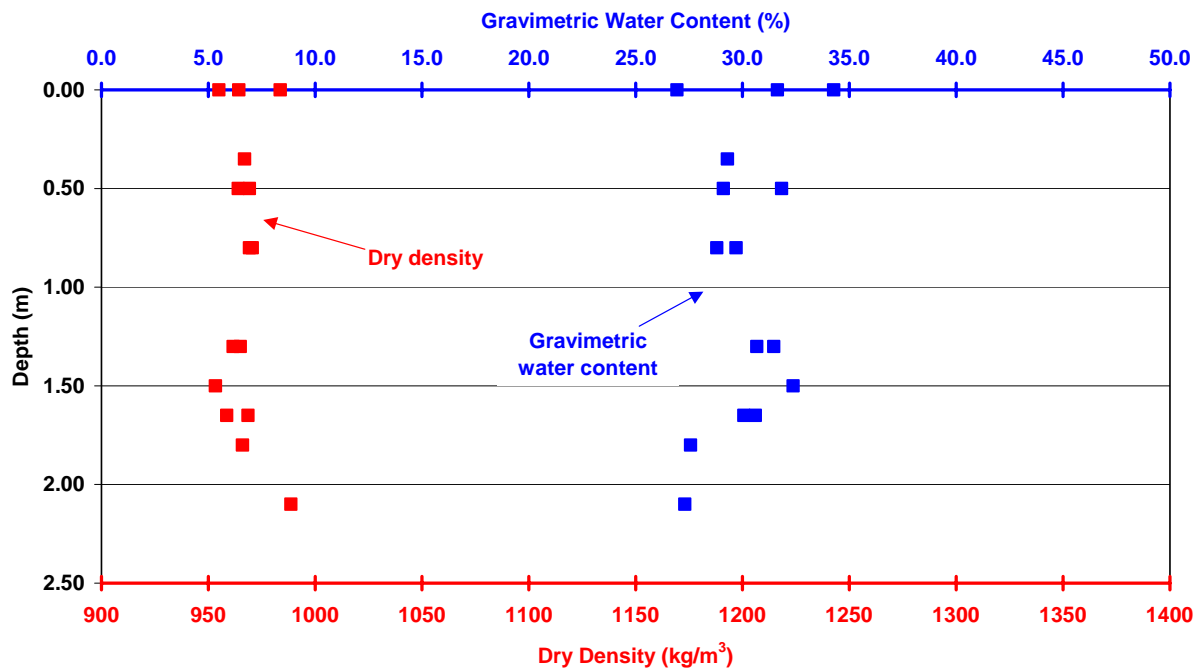
The base of the tank of each lysimeter was installed 2.5 m below the surface of the Coke. A tracked backhoe was used to create the excavations in the Coke (Photo B.2). Due to the physical properties of the Coke material, the excavations were made with very shallow slopes so that the excavation was safe without the use of a slip box (Photo B.3). As the material was being excavated, *in situ* density and moisture conditions were measured at approximately 0.5 m lifts using a nuclear densometer (Photo B.3).

Once the excavation reached the required depth, the floor of the excavation was first levelled, and then a 2.5 m diameter cone was created in the Coke. Over the 1.25 m radius, the cone dropped in elevation by approximately 15 cm towards the centre. The purpose of the cone was to force the bottom of the tank to form a cone shape to ensure that all water percolating into the tank would collect in the centre of the tank. Once the cone had been formed, the backhoe was used to lower the tank into position at the bottom of the excavation (Photo B.4). Due to the physical properties of the Coke material, it was not necessary to add a filter layer to the bottom of the tank lysimeter. Therefore, the Coke was backfilled directly into the tank (Photo B.5). Ladders were constructed to facilitate climbing into and out of the tank (Photo B.6).

Both the tank and the excavation around the tank were backfilled simultaneously. Due to the depth of the tank, the tank was considered a confined space. The oxygen concentration in the tank was monitored at all times until the tank was sufficiently backfilled. The Coke was placed in 0.5 m lifts and compacted with a plate tamper (Photo B.7). A nuclear densometer was used to measure the density and moisture content after compaction of each lift to ensure that the conditions were similar to *in situ* conditions. The objective of the tank backfilling exercise was to create a material profile inside the tank that mimics the material profile outside the tank. Samples of the Coke were collected for future laboratory characterization. Figures 2.4 and 2.5 present the results of the field-testing of density and moisture content. As illustrated in these figures, *in situ* moisture content and dry density do not vary significantly with depth at this site.



**Figure 2.4** *In situ* density and moisture conditions measured at the Coke thin-cover monitoring site.



**Figure 2.5** *In situ* density and moisture conditions measured at the Coke thick-cover monitoring site.

A piezometer and an *in situ* monitoring system were installed within each of the net percolation collection tanks. The piezometer allows for measuring the net percolation rate by monitoring the depth of water that collects in the bottom of the tank, and removing the water as needed. Water samples can also be obtained. The *in situ* monitoring system is for monitoring temporal and spatial changes in moisture storage and O<sub>2</sub> / CO<sub>2</sub> gas concentrations in the tank backfill. Once the first 0.5 m lift was placed, shovels were used to excavate two holes to the bottom of the tank, one at the centre and one between the centre and the wall. The piezometer was placed in the excavation in the centre of the tank, and the moisture monitoring (Diviner 2000®) pipe was placed in the excavation between the piezometer hole and the edge of the tank. The purpose of re-excavating the holes was to provide an anchor for the bottom of the pipes to ensure they were not shifted during the backfilling process. A shallow excavation near the wall was made to place the deepest gas sampling port. As the remainder of the tank was backfilled, the material was carefully compacted around the instrumentation and the gas sampling ports were placed at various depths. Further details on the piezometer and *in situ* monitoring systems are provided in Sections 2.3 and 2.4.

### **2.3 In Situ Monitoring Instruments**

Sensors to measure *in situ* volumetric water content and O<sub>2</sub> / CO<sub>2</sub> gas concentrations were installed in the profile inside each of the tank lysimeters. The depths and locations at which these *in situ* monitoring instruments were installed are shown on Dwg. No. 690/4-002. A brief description of the *in situ* monitoring instruments is provided below.

#### **2.3.1 Manual Water Content Sensor**

The Diviner 2000® system, manufactured by Sentek Pty Ltd. of Australia, is being used in this study to monitor changes in moisture storage within each of the lysimeter tanks. The Diviner 2000® system consists of one sensor on a shaft with an automatic depth sensor (i.e. the probe) and pre-installed access tubes. Insertion of the probe into an access tube provides an immediate profile of soil moisture at regular depth intervals of 10 cm. The probe is connected to a hand-held display unit, which gives the operator graphical displays of the data, as well as storage of multiple sets of readings. The display unit can be connected to a desktop computer to download the data. The Diviner 2000® system uses electrical capacitance to measure the *in situ* volumetric water content of the material surrounding the access tube.

The Diviner 2000® system comes with a standard “default” calibration equation derived from sands, loams, and clay loams. Material-specific calibration curves will be obtained by OKC using the samples taken during the tank lysimeter installation and the upcoming soil station installation.

### 2.3.2 *Oxygen / Carbon Dioxide Ports*

*In situ* sampling ports are being used in this study to monitor changes in O<sub>2</sub> and CO<sub>2</sub> gas concentrations in the Coke and cover materials. A portable gas analyzer is used to measure the gas concentrations at each sampling port. The gas sampling ports consist of a chainsaw gas filter, which was slightly modified before covering it with two pieces of fiberglass window screening and connected to ¼" OD black poly tubing. This design allows an adequate gas sample to be extracted for analysis and minimizes the risk of fine particulate plugging up the sampling port and potentially entering the portable gas analyzer.

Four gas ports were installed under the thick cover and five gas ports were installed under the thin cover. The ¼" poly tubing for a given gas sampling port was extended to the ground surface and temporarily housed inside a 5-gallon pail. Once the covers were placed, the tubing was housed in a 50 mm PVC pipe, which has a port for accessing the gas tubes.

### 2.4 *Piezometer*

One piezometer was installed in the centre of each tank lysimeter to facilitate water depth measurement, sample collection, and water removal (Dwg. Nos. 690/4-001 and -002). The piezometer consists of 50 mm diameter PVC pipe with a 30 cm slotted section at the bottom. The slots were covered with a filter sock to prevent particulates from entering the piezometer. As water percolates through the cover and the underlying material, it eventually reaches a zero pressure condition and starts to pool at the base of the lysimeter tank. The pooled water can then be monitored inside the piezometer to determine the amount of water that has percolated over a given time period. Typically, a water level indicator is used to measure the depth of water in the tank. Once the water level has been determined, then the water is removed using either a manual bailer or a pump. At this point, samples of the water can be taken.

It is important to monitor the water level regularly, especially after storm events, to increase the accuracy of the predicted net percolation rate. It is also important not to allow the tank to collect too much water. The ponded water forms an artificial phreatic surface inside the tank, which affects the suction conditions of the material profile through the tank. If the phreatic surface is too high, then the suction conditions of the material inside and outside the tank may contrast. Contrasting suctions form a gradient that can cause water to either flow into or out of the tank causing error in the predicted net percolation rate.

It is recommended that the lysimeters be pumped monthly in the winter, and bi-weekly during the summer field season. In addition, OKC recommends the following pumping schedule following a major rainfall or snowmelt event: pump the lysimeter the day following the event, pump again three days following the event, pump again 6 days following the event, and pump again 12 days following the event. After the 12<sup>th</sup> day, the regular bi-weekly pumping schedule can be resumed.

Frequent pumping greatly increases the accuracy of the predicted net percolation results. Pumping immediately following major rainfall or snowmelt events allows the impact of these events to be closely correlated to the net percolation rate. Frequent pumping also reduces the impact of small leaks from the lysimeter or moisture loss due to vapour diffusion. It is also important to pump frequently if water chemistry is being monitored; the water does not sit for long periods of time, which can change the concentrations of dissolved constituents.

### **3 METEOROLOGICAL STATION INSTALLATION**

An automated meteorological monitoring system was installed on the Mildred Lake Coke storage facility in the fall of 2003; the sensors are described below followed by the data acquisition system.

#### **3.1 *Meteorological Sensors***

A fully automated meteorological station was installed on the Coke storage facility to monitor air temperature, relative humidity (RH), wind speed and direction, net radiation, and precipitation (rainfall and snowfall). Air temperature and RH are being measured with a Model HMP45CF probe, which has an operating temperature range of  $-55^{\circ}\text{C}$  to  $+50^{\circ}\text{C}$  and an RH measurement range of 0 to 100%. A radiation shield surrounds the air temperature / RH probe to minimize the effects of solar radiation and wind on the measurement. An R.M. Young Model 05103 wind monitor is being used in this study to measure wind speed and direction. Net radiation (i.e. the algebraic sum of incoming and outgoing all-wave radiation) is being measured with a NR-Lite Net Radiometer, which is a high-output thermopile sensor mounted approximately 2.5 m above the ground surface. All of these sensors are attached to the meteorological station mast/tripod. Precipitation is recorded with a model TE525 tipping bucket rain gauge and with a model CS705 snowfall adapter that contains ethylene glycol to melt snowfall and subsequently measure the snow water equivalent. Campbell Scientific Canada (CSC) supplied all components of the meteorological stations.

#### **3.2 *Data Acquisition System for Meteorological Station***

The meteorological station is connected to an automated data acquisition system (DAS) located on the meteorological station mast/tripod. The DAS consists of a CR10X datalogger, powered by a rechargeable battery / solar panel system. The datalogger and rechargeable battery are housed in an environmentally sealed fibreglass enclosure, supplied by CSC. The lead-wire for the tipping bucket rain gauge was buried in the near surface cover material to protect against wildlife and environmental damage.

The datalogger program is currently setup as follows. Each climatic parameter is measured every 60 seconds and hourly and daily averages, as well as daily maximum and minimum values, are output to final memory for subsequent data collection. Data are output as precipitation occurs so that intensity-duration curves can be generated for all precipitation events. Data are collected using a laptop computer. The data collection procedure is described in OKC (2001). The DAS wiring diagram is given in Dwg. No. 690/4-003.

## **4 SUMMARY OF FIELD PERFORMANCE MONITORING**

Precipitation (rainfall and snowfall) is being recorded by a fully automated meteorological station, as well as various other climatic parameters that are required for calculating potential evaporation and conducting field response numerical modelling. Photo B.9 shows the final as-built monitoring system installed at the Mildred Lake Coke storage facility (prior to cover placement).

SCL has contracted OKC to collect field data and conduct routine maintenance on the monitoring systems on a monthly basis. A field performance monitoring reference manual has been prepared to explain the necessary monitoring and maintenance required (OKC, 2001). OKC personnel also perform non-routine maintenance of the monitoring equipment on an as-needed basis. The instruments will be downloaded and maintained on a minimum monthly basis. Any issues that arise over this time frame will be addressed in the monthly status reports generated for all the watershed instrumentation.

## 5 REFERENCES

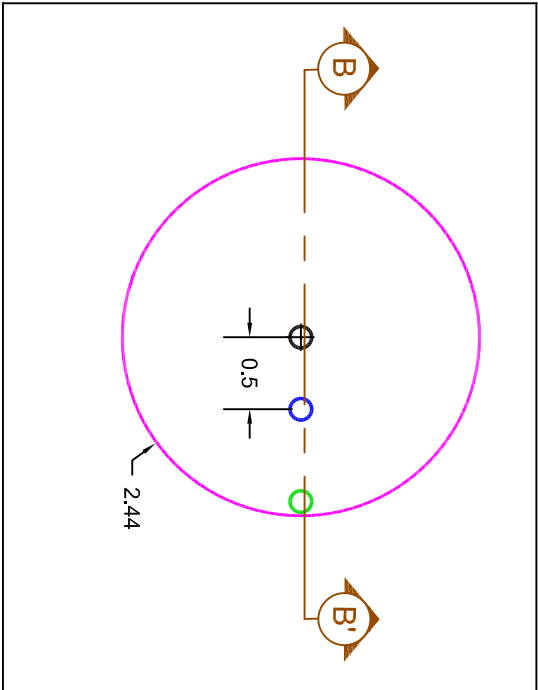
- Fredlund, D.G. and Xing, A. 1994. Equations for the soil-water characteristic curve. *Canadian Geotechnical Journal*. 31: 521-532.
- O'Kane Consultants Inc. (OKC), 2001. Field performance monitoring reference manual for the Southwest Sands Storage and 30-Dump automated water balance monitoring systems at Syncrude Canada Ltd. Report #653-1 submitted to SCL, December 2001.
- O'Kane Consultants Inc. (OKC), 2003a. Proposed Cost Estimate for Installation of Automated Meteorological Station at the Coke Watershed at Syncrude Canada Ltd. during the 2003 Field Season. Prepared for SCL by OKC, April 29, 2003.
- O'Kane Consultants Inc. (OKC), 2003b. Proposed Cost Estimate for Installation of Two Tank Lysimeters at the Coke Watershed at Syncrude Canada Ltd. during the 2003 Field Season. Prepared for SCL by OKC, August 26, 2003.
- O'Kane, M. and Barbour, S.L. 2003. Predicting field performance of lysimeters used to evaluate cover systems for mine waste. *Proceedings of the 6<sup>th</sup> International Conference on Acid Rock Drainage (ICARD)*, Cairns, QLD, Australia, July 12 – 18. pp. 327-339.



# **APPENDIX A**

## **Drawings**

Tank Lysimeter - Thick Cover



LEGEND

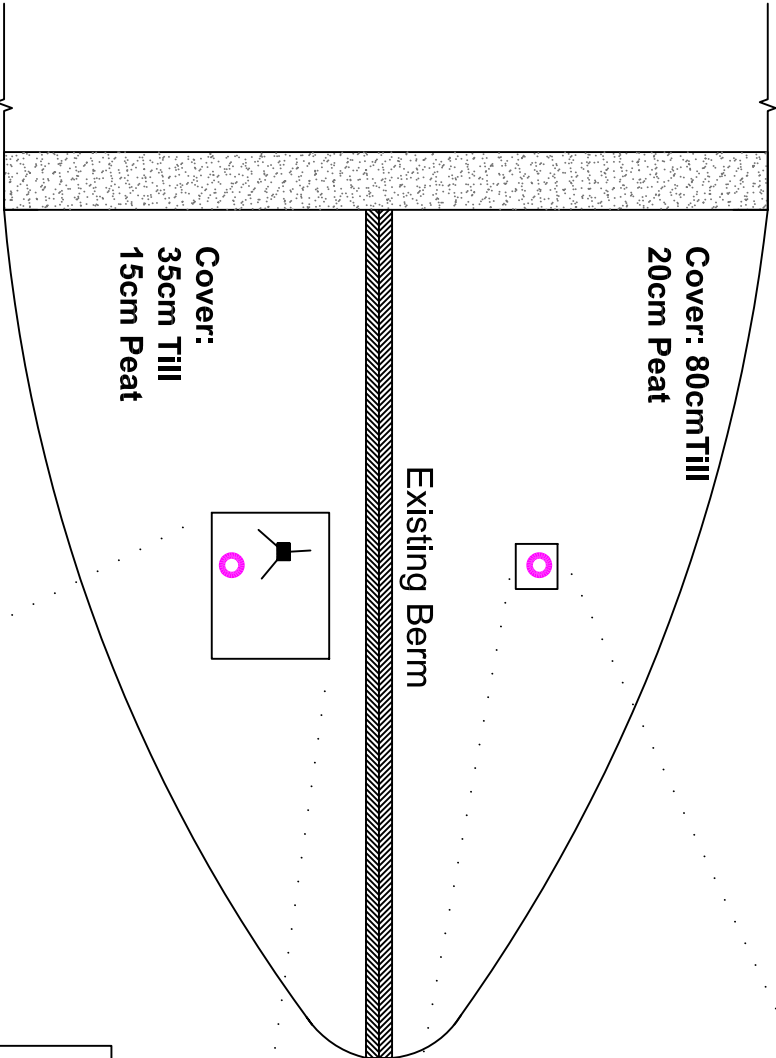
Piezometer

Diviner 2000 Access Tube

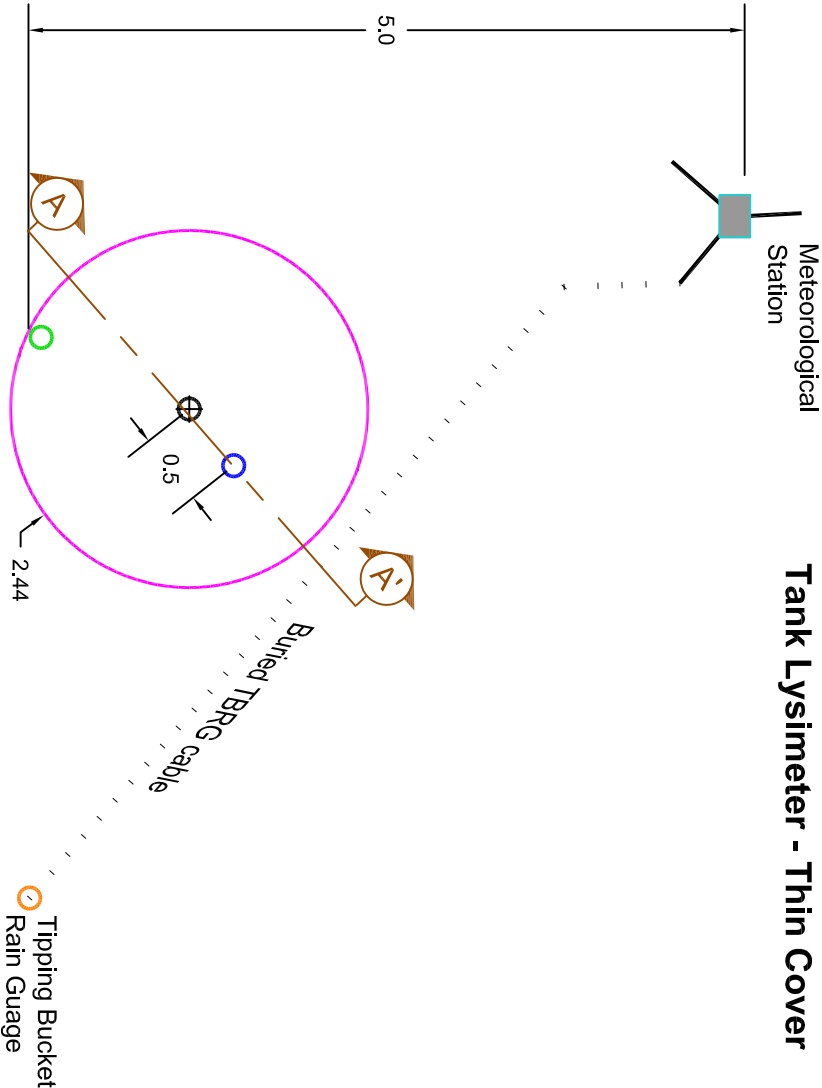
Gas Sampling Ports

Tank Lysimeters

Plan - Coke Test Cover Area



Tank Lysimeter - Thin Cover



Notes:

- 1) All dimensions are in metres.
- 2) Relative locations of instrumentation shown are approximate.

REV.	DESCRIPTION	DATE	Drawn by: I. Turgeon	Date: Dec. 10, 2004
			Approved by: B. Dobchuk	Date: Dec. 10, 2004
			Scale: NTS	Rpt. No.: 690/4-01

O'Kane Consultants Inc.

Integrated Geotechnical Engineering Services

Specialists in Unsaturated Zone Hydrology

SYNCRUDE CANADA LTD.

Mildred Lake Coke Watershed Automated Water Balance Monitoring Systems

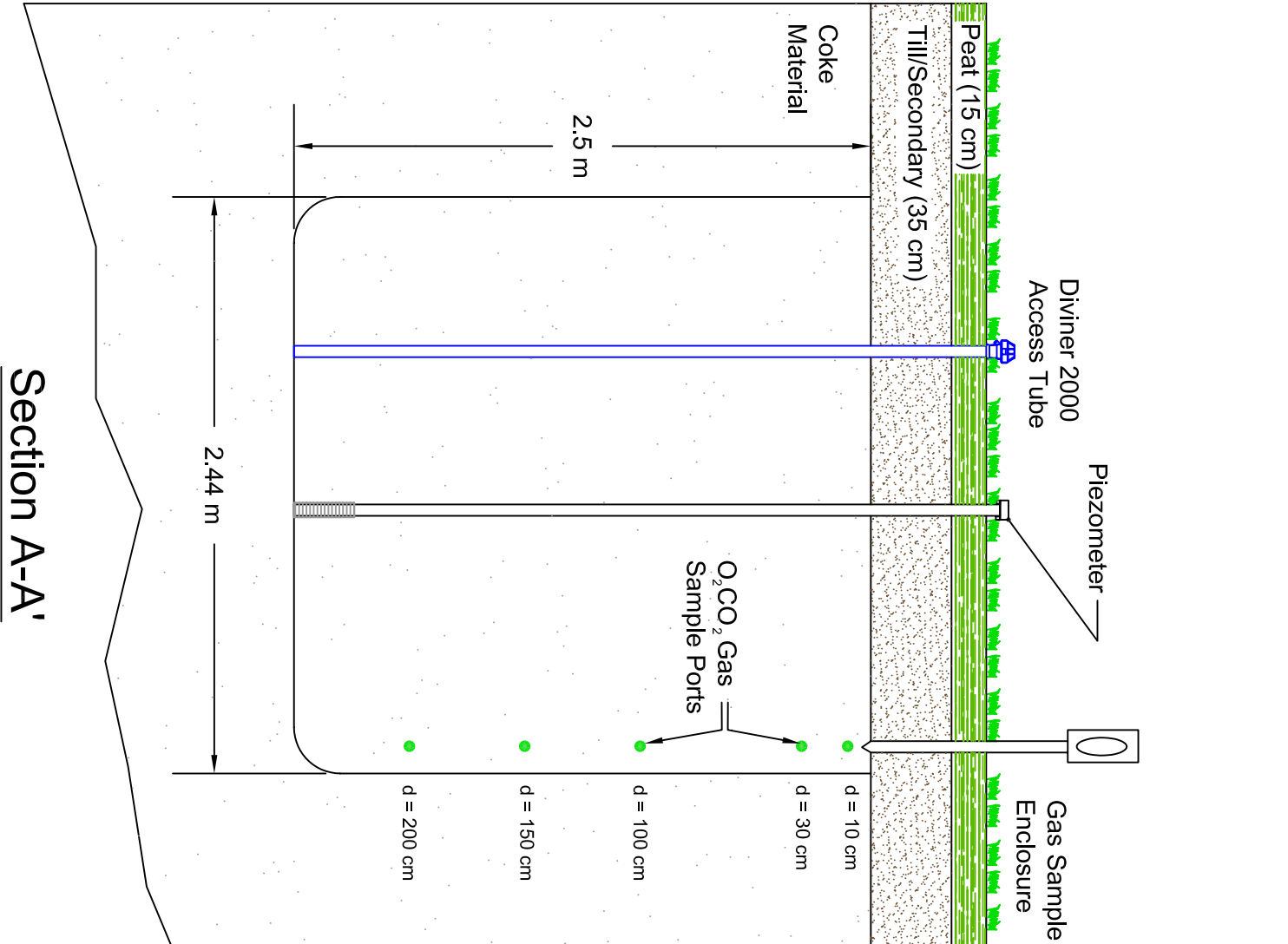
OKC Project No. 690/4

Plan of Instrumentation Installed at

Coke Test Cover Monitoring Sites

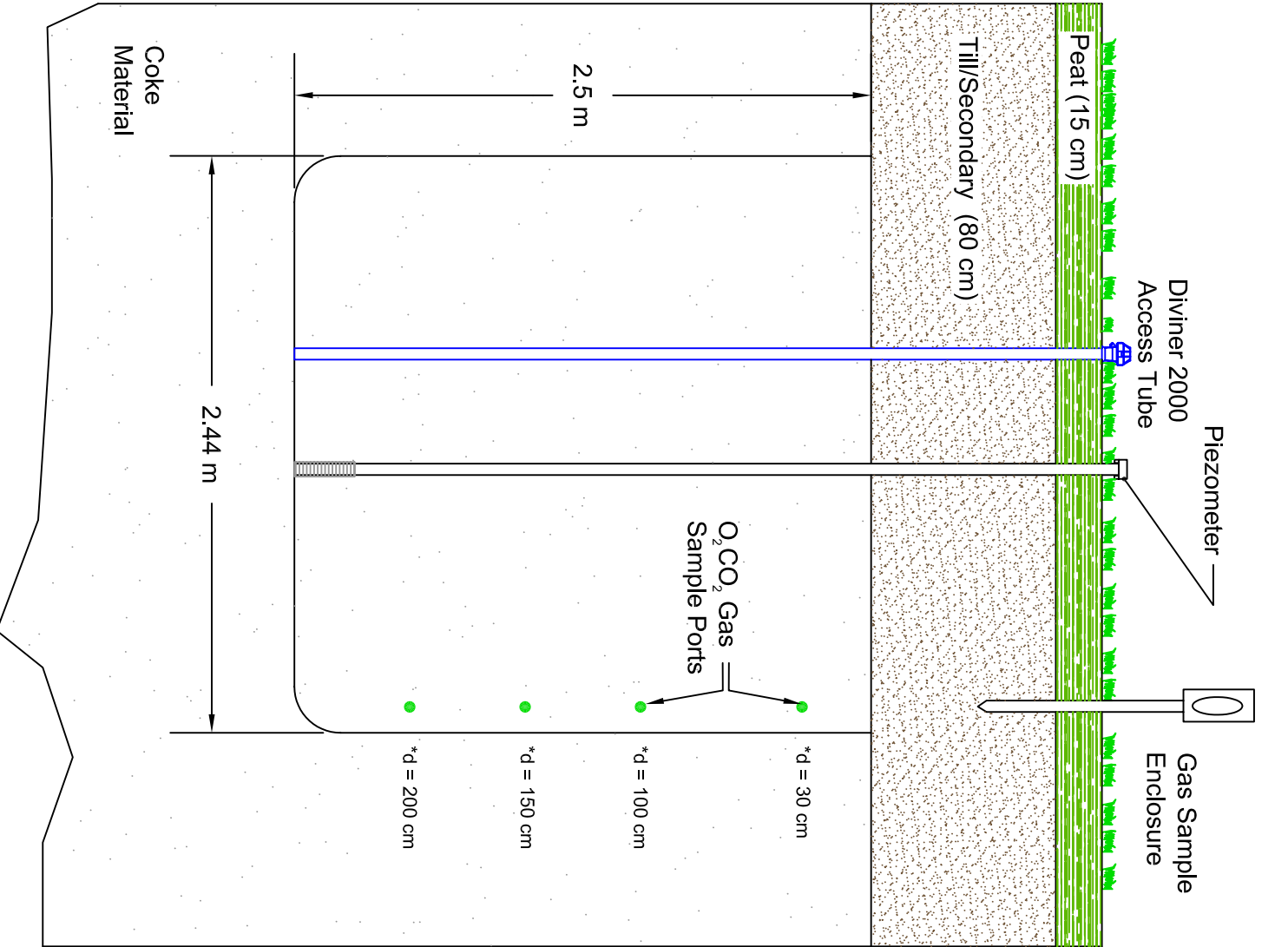
Dwg. No.: 690/4-001

Rev.: 0



Section A-A'

See Dwg. 690/4-001




Section B-B'

See Dwg. 690/4-001

\* Depths approximated

REV.	DESCRIPTION	DATE	Drawn by: I. Turgeon	Date: Dec. 13, 2004
			Approved by: B. Dobchuk	Date: Dec. 14, 2004
			Scale: NTS	Rpt. No.: 690/4-01



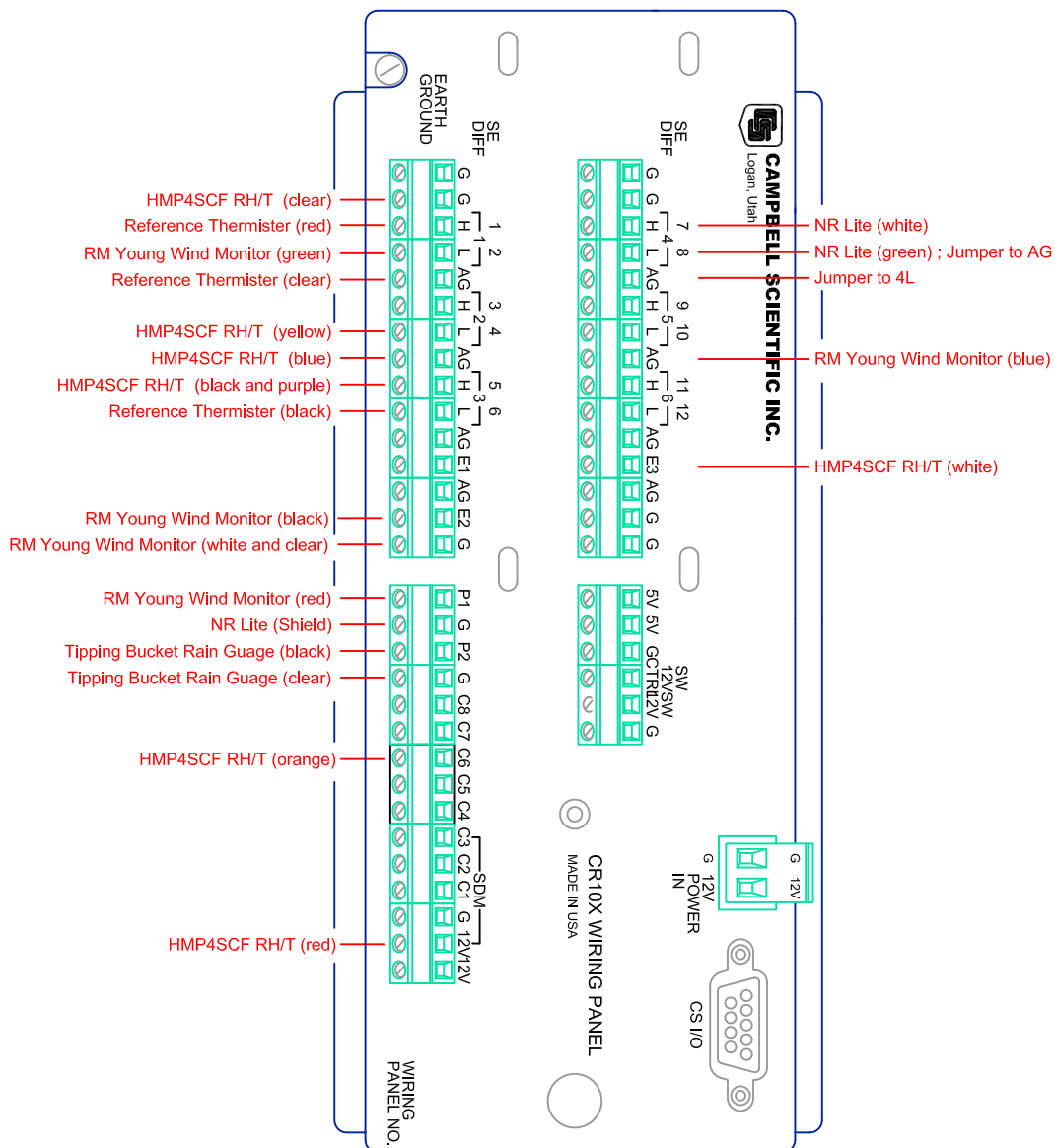
**O'Kane Consultants Inc.**  
*Integrated Geomechanical Engineering Services  
Specialties in Unsaturated Zone Hydrology*

**SYNCRUDE CANADA LTD.**

Mildred Lake Coke Watershed Automated  
Water Balance Monitoring Systems  
*OKC Project No. 690/4*

**Tank Lysimeter Cross-Sections for  
Coke Test Cover Monitoring Sites**

Dwg. No.: 690/4-002      Rev.: 0



**SYNCRUDE CANADA LTD.**

Mildred Lake Coke Watershed Automated  
Water Balance Monitoring Systems

OKC Project No. 690/4

*Wiring Diagram for  
CR10X Meteorological Instrumentation*

REV.	DESCRIPTION	DATE	Drawn by: I. Turgeon	Date: Dec. 16, 2004
			Approved by: B. Dobchuk	Date: Dec. 17, 2004
			Scale: NTS	Rpt. No.: 690/4-01

Dwg. No.: 690/4-003

Rev.: 0

# **APPENDIX B**

## **Instrument Installation Photo Log**



**Photo B.1:** Transportation of a prepared tank lysimeter to the installation location.



**Photo B.2:** Excavation of a pit for installation of a tank lysimeter.





**Photo B.3:** Density and moisture content measurement using a nuclear densometer.



**Photo B.4:** Placement of tank lysimeter into excavation.





**Photo B.5:** Backfill of material inside the tank lysimeter.



**Photo B.6:** Placement of ladders for entering and exiting the tank lysimeter.





**Photo B.7:** Compaction of material around the tank lysimeter using a plate tamper.



**Photo B.8:** Contouring the final surface layer.



**Photo B.9:** As-built photo of the thin cover tank lysimeter and the automated meteorological station for the Mildred Lake Coke storage facility (prior to cover placement).

# Coke Beach Deep Lysimeter

Station	Coke Beach Deep Lysimeter	Code: CDL	ID: 024
Installed:	Aug-2004	Installed By: OKC	
UTM 12 N:	E:		
Structure: MLSB	Station Type: Soil		
	Instruments: 229 Soil Suction Sensors (8)		
	CS616 Soil Moisture Probes (8)		
	Data Collection Frequency: 229 and CS616 sensors 4 times/day		
	Reducer Data Sheets (4+1): Soil Temperature Data		
	CS615 Water Content Data		
	229 Suction Data		
	Suction vs. Water Content		
	(Suction Reducer Program)		

Additional information for this station will be provided in the second quarter 2005 database update.

An automated soil monitoring system was installed at the Mildred Lake Settling Basin (MLSB) adjacent to the deep lysimeter tank in Cell 5. The soil monitoring system was installed during the Summer/Fall of 2004; the datalogger was commissioned March 2005.

MLSB Cell 5 performance is monitored using a system designed to measure climate conditions within the localized areas (rainfall and potential evaporation) and moisture and temperature conditions within the cover and underlying coke.

## Meteorological Station

The Coke Met Station is approximately 100 m from the Coke Deep Lysimeter and is used to record meteorological data for both the Coke Deep and Shallow Lysimeters.

## In Situ Monitoring Instruments

Sensors were installed to automatically measure *in situ* soil moisture, suction, and temperature. Campbell Scientific (CS) 229 thermal conductivity (TC) sensors are being used to monitor *in situ* matric suction and temperature. Time domain reflectometry (TDR) sensors (CS 616) sensors were installed to measure volumetric water content within the cover and waste materials. Material specific calibration curves have been developed for the CS 616 sensors. The TC sensors were calibrated at the OKC laboratory prior to installation. Details of the soil sensor types are listed below.

**In-Situ Monitoring Components:**

- CS 229 thermal conductivity sensors installed into cover and coke material profile
- CS 616 volumetric water content sensors installed into cover and coke material profile

These sensors were installed to measure in situ matric suction, temperature and volumetric water content in the cover and coke materials. These in situ monitoring instruments were installed in a single instrumentation nest at the monitoring site, approximately 10.0 m from the centre of the meteorological station mast/tripod. The *in situ* monitoring instruments were installed at the following depths: 5 cm, 20 cm, 30 cm, 45 cm, 70 cm, 90 cm, 100 cm, and 180 cm. The peat – till interface occurred at a depth of 25 cm. The till – coke interface occurred at a depth of 95 cm.

**Data Acquisition System for In Situ Moisture Sensors**

The TC and TDR sensors at the MLSB Coke Deep Lysimeter site are connected to an automated data acquisition system (DAS). The DAS consists of a CS CR10X datalogger, powered by a rechargeable battery / solar panel system, and two multiplexers, one each for the TC and TDR sensors. All the multiplexers, dataloggers and rechargeable batteries are housed in an environmentally sealed fiberglass enclosure, which were supplied by CS. The lead wires for the TC and TDR sensors were buried in the near surface cover material and then pulled into the DAS enclosure through a PVC pipe to provide protection against animals and environmental damage. The station currently measures each soil parameter every 6 hours. DAS system details are listed below.

**DAS Components:**

- CR10X Datalogger
- Two AM416 multiplexers
- CE8 constant current interface

# Coke Beach Shallow Lysimeter

Station	Coke Beach Shallow Lysimeter	Code: CSL	ID: 023
Installed:	Aug-2004	Installed By: OKC	
UTM 12 N:	E:		
Structure: MLSB	Station Type: Soil		
	Instruments: 229 Soil Suction Sensors (8)		
	CS616 Soil Moisture Probes (8)		
	Data Collection Frequency: 229 and CS616 sensors 4 times/day		
	Reducer Data Sheets (4+1): Soil Temperature Data		
	CS615 Water Content Data		
	229 Suction Data		
	Suction vs. Water Content		
	(Suction Reducer Program)		

Additional information for this station will be provided in the second quarter 2005 database update.

An automated soil monitoring system was installed at the Mildred Lake Settling Basin (MLSB) adjacent to the deep lysimeter tank in Cell 4. The soil monitoring system was installed during the Summer/Fall of 2004; the datalogger was commissioned March 2005.

MLSB Cell 4 performance is monitored using a system designed to measure climate conditions within the localized areas (rainfall and potential evaporation) and moisture and temperature conditions within the cover and underlying coke.

## Meteorological Station

The Coke Met Station is approximately 5 m from the Coke Shallow Lysimeter and is used to record meteorological data for both the Coke Deep and Shallow Lysimeters.

## In Situ Monitoring Instruments

Sensors were installed to automatically measure *in situ* soil moisture, suction, and temperature. Campbell Scientific (CS) 229 thermal conductivity (TC) sensors are being used to monitor *in situ* matric suction and temperature. Time domain reflectometry (TDR) sensors (CS 616) sensors were installed to measure volumetric water content within the cover and waste materials. Material specific calibration curves have been developed for the CS 616 sensors. The TC sensors were calibrated at the OKC laboratory prior to installation. Details of the soil sensor types are listed below.

**In-Situ Monitoring Components:**

- CS 229 thermal conductivity sensors installed into cover and coke material profile
- CS 616 volumetric water content sensors installed into cover and coke material profile

These sensors were installed to measure in situ matric suction, temperature and volumetric water content in the cover and coke materials. These in situ monitoring instruments were installed in a single instrumentation nest at the monitoring site, approximately 10.0 m from the centre of the meteorological station mast/tripod. The *in situ* monitoring instruments were installed at the following depths: 5 cm, 10 cm, 20 cm, 25 cm, 30 cm, 40 cm, 90 cm, and 180 cm. The peat – till interface occurred at a depth of 15 cm. The till – coke interface occurred at a depth of 35 cm.

**Data Acquisition System for In Situ Moisture Sensors**

The TC and TDR sensors at the MLSB Coke Deep Lysimeter site are connected to an automated data acquisition system (DAS). The DAS consists of a CS CR10X datalogger, powered by a rechargeable battery / solar panel system, and two multiplexers, one each for the TC and TDR sensors. All the multiplexers, dataloggers and rechargeable batteries are housed in an environmentally sealed fiberglass enclosure, which were supplied by CS. The lead wires for the TC and TDR sensors were buried in the near surface cover material and then pulled into the DAS enclosure through a PVC pipe to provide protection against animals and environmental damage. The station currently measures each soil parameter every 6 hours. DAS system details are listed below.

**DAS Components:**

- CR10X Datalogger
- Two AM416 multiplexers
- CE8 constant current interface

APPENDIX B  
BOREHOLE/INSTRUMENT CONSTRUCTION DETAILS

## Instrumentation Log

<b>Name:</b>	<b>GPS050401</b>	Completion Date: May 27, 2005
Instrumentation Type:	Gas Probe and Temperature Sensor Nest	
Location:	Shallow Cover	
Total Depth:	3.40 m	
Borehole Diameter:	100 mm	

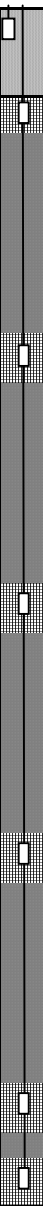
Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-10 cm		Backfilled with Secondary (Shallow Gas/Temp Probe installed at 20 cm in separate hole)	
TILL/SECONDARY 10-30 cm			
COKE 30 - 340 cm		Sand Filter (30 - 50 cm) with Gas/Temp Probe 40 cm	
		Bentonite 50 - 120 cm	
		Sand Filter (120 - 140 cm) with Gas/Temp Probe 130 cm	
		Bentonite 140 - 220 cm	
		Sand Filter (220 - 240 cm) with Gas/Temp Probe 230 cm	
		Bentonite 240 - 320 cm	
		Sand Filter (320 - 340 cm) with Gas/Temp Probe 330 cm	

EOH



## Instrumentation Log

<b>Name:</b>	<b>GPS050402</b>	Completion Date: May 26, 2005
Instrumentation Type:	Gas Probe and Temperature Sensor Nest	
Location:	Shallow Cover	
Total Depth:	4.80 m	
Borehole Diameter:	100 mm	

Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-15 cm			Backfilled with Secondary (Shallow Gas/Temp Probe installed at 20 cm in separate hole)
TILL/SECONDARY 15-35 cm			
<div style="text-align: center;">COKE 35 - 450 cm</div>			Sand Filter (35 - 50 cm) with Gas/Temp Probe 40 cm
			Bentonite 50 - 130 cm
			Sand Filter (130 - 150 cm) with Gas/Temp Probe 140 cm
			Bentonite 150 - 230 cm
			Sand Filter (230 - 250 cm) with Gas/Temp Probe 240 cm
			Bentonite 250 - 330 cm
			Sand Filter (330 - 350 cm) with Gas/Temp Probe 340 cm
			Bentonite 350 - 430 cm
SAND TAILINGS 450 - 480 cm			Sand Filter (430 - 450 cm) with Gas/Temp Probe 440 cm
			Bentonite 450 - 460 cm
			Sand Filter (460 - 480 cm) with Gas/Temp Probe 470 cm

EOH

## Instrumentation Log

<b>Name:</b>	<b>GPD050403</b>	Completion Date: May 28, 2005
Instrumentation Type:	Gas Probe and Temperature Sensor Nest	
Location:	Deep Cover	
Total Depth:	3.50 m	
Borehole Diameter:	100 mm	

Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-20 cm			Backfilled with Peat (Shallow Gas/Temp Probe installed at 20 cm in separate hole)
TILL/SECONDARY 20-105 cm			Sand Filter (20 - 40 cm) with Gas/Temp Probe
			Bentonite 40 - 75 cm
			Sand Filter (75 - 95 cm) with Gas/Temp Probe
			Bentonite 95 - 110 cm
COKE 105 - 350 cm			Sand Filter (110 - 130 cm) with Gas/Temp Probe
			Bentonite 130 - 220 cm
			Sand Filter (220 - 240 cm) with Gas/Temp Probe
			Bentonite 240 - 320 cm
			Sand Filter (320 - 340 cm) with Gas/Temp Probe
			Bentonite 340 - 350 cm EOH

## Instrumentation Log





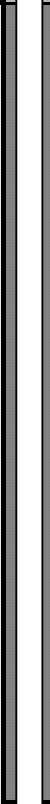




<b>Name:</b>	<b>GPD050404</b>	Completion Date: June 14, 2005
Instrumentation Type:	Gas Probe and Temperature Sensor Nest	
Location:	Deep Cover	
Total Depth:	4.20 m	
Borehole Diameter:	100 mm	

Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-15 cm			Backfilled with Peat (Shallow Gas/Temp Probe installed at 20 cm in separate hole)
TILL/SECONDARY 15-110 cm			Bentonite 15 - 80 cm
			Sand Filter (80 - 100 cm) with Gas/Temp Probe 90 cm
			Bentonite 100 - 120 cm
COKE 110 - 420 cm			Sand Filter (120 - 140 cm) with Gas/Temp Probe 130 cm
			Bentonite 140 - 220 cm
			Sand Filter (220 - 240 cm) with Gas/Temp Probe 230 cm
			Bentonite 240 - 320 cm
			Sand Filter (320 - 340 cm) with Gas/Temp Probe 330 cm
			Bentonite 340 - 380 cm
			Sand Filter (380 - 395 cm) with Gas/Temp Probe 390 cm
			Bentonite 395 - 410 cm
			Sand Filter (410 - 420 cm) with Gas/Temp Probe 415 cm
EOH			

## Instrumentation Log

**Name:** SPS050401  
**Instrumentation Type:** Stand-pipe Piezometer  
**Location:** Shallow Cover  
**Total Depth:** 4.52 m  
**Borehole Diameter:** 100 mm  
**Stick-up height:** 0.565 m    above grade

**Completion Date:** 14-Jun-05  
**Ground elev (m):** 352.477  
**Casing elev (m):**



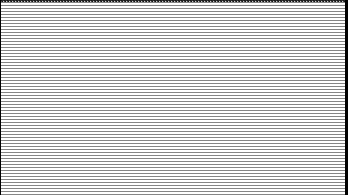

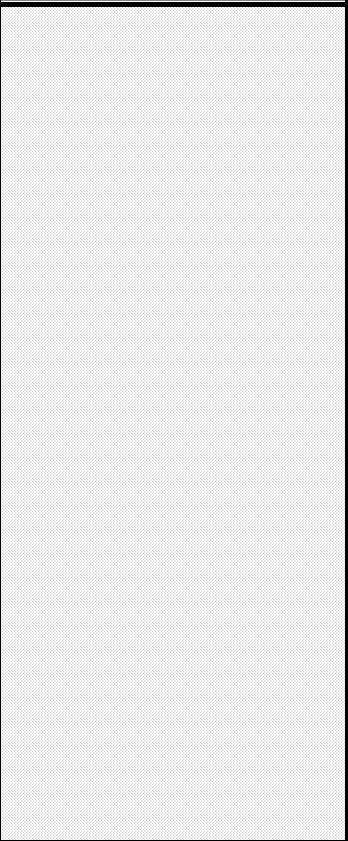






Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-15 cm		Backfilled with Secondary	
TILL/SECONDARY 15-35 cm			
<div style="text-align: center;">COKE</div> <div style="text-align: center;">35 - 452 cm</div>		Bentonite 35 - 360 cm	
		50 mm Ø PVC tube	
		Coke sloughed from 360 - 452 cm	
		50 mm Ø Stainless Steel Screen 392 - 452 cm	
		Casing was hand-driven from 360 to 450 cm	
		Stainless Steel Drive Point	

EOH

## Instrumentation Log

**Name:** SPD050402  
**Instrumentation Type:** Stand-pipe Piezometer  
**Location:** Deep Cover  
**Total Depth:** 4.50 m  
**Borehole Diameter:** 100 mm  
**Stick-up height:** 0.71 m    above grade

**Completion Date:** May 28, 2005



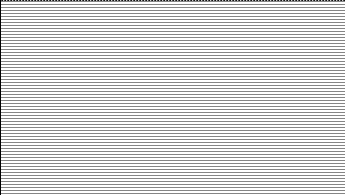

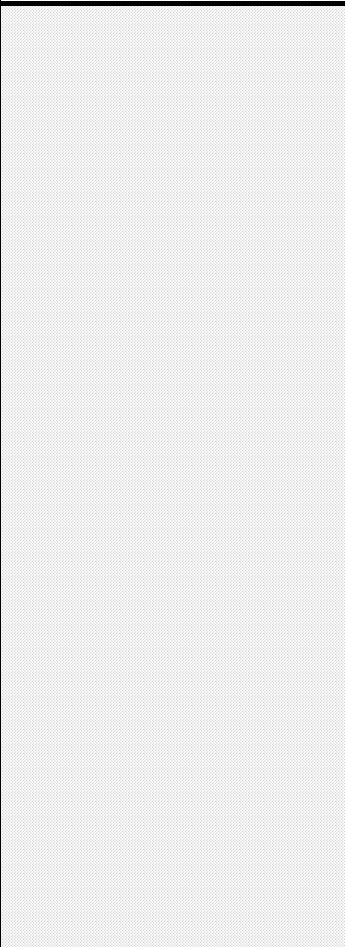




Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-20 cm			
TILL/SECONDARY 20-100 cm			Backfilled with Secondary
COKE 100 - 450 cm			Bentonite 100 - 240 cm
			50 mm Ø PVC tube
			Sand Filter 240 - 360 cm
			50 mm Ø PVC screen 300 - 450 cm
			Coke sloughed 360 - 450 cm Casing was hand-driven from 360 to 450 cm
			Stainless Steel Drive Point

EOH

## Instrumentation Log

**Name:** SPD050403  
**Instrumentation Type:** Stand-pipe Piezometer  
**Location:** Deep Cover  
**Total Depth:** 4.85 m  
**Borehole Diameter:** 100 mm  
**Stick-up height:** 0.17 m    above grade

Completion Date: June 14, 2005

Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-20 cm			
TILL/SECONDARY 20-100 cm			Backfilled with Secondary
COKE 100 - 485 cm			Bentonite 100 - 390 cm
			50 mm Ø PVC tube
			Coke sloughed 390 - 485 cm
			Casing was hand-driven from 390 to 485 cm 50 mm Ø Stainless steel screen 425 - 485 cm Stainless Steel Drive Point

EOH

## Instrumentation Log

<b>Name:</b>	<b>SPS050404</b>
Instrumentation Type:	Stand-pipe Piezometer
Location:	Shallow Cover
Total Depth:	4.65 m
Borehole Diameter:	100 mm
Stick-up height:	0.44 m      above grade

Completion Date: June 16, 2005



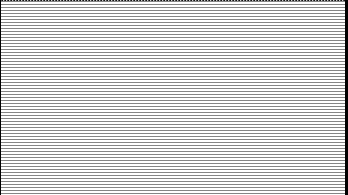
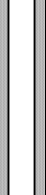
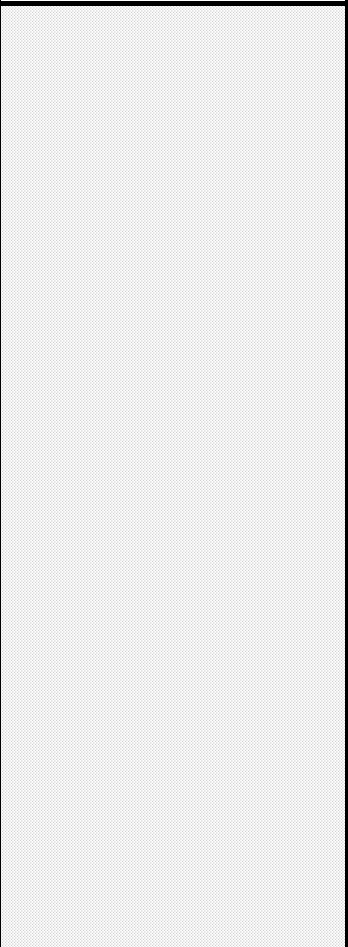
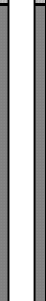
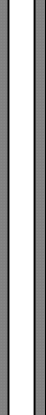


Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-15 cm			
TILL/SECONDARY 15-25 cm			
COKE 25 - 465 cm			Backfilled with Secondary
		Bentonite 100 - 370 cm	
		50 mm Ø PVC tube	
		Coke sloughed 370 - 465 cm	
		Casing was hand-driven from 390 to 485 cm	
		50 mm Ø Stainless steel screen 425 - 485 cm	
		Stainless Steel Drive Point	

EOH

## Instrumentation Log

**Name:** SPD050405  
**Instrumentation Type:** Stand-pipe Piezometer  
**Location:** Deep Cover  
**Total Depth:** 4.85 m  
**Borehole Diameter:** 100 mm  
**Stick-up height:** 0.57 m    above grade

Completion Date: June 16, 2005

Borehole Log Description		Backfill Description	
PEAT/MINERAL 0-20 cm			
TILL/SECONDARY 20-100 cm			Backfilled with Secondary
COKE 100 - 485 cm			Bentonite 100 - 390 cm
			50 mm Ø PVC tube
			Coke sloughed 390 - 485 cm
			Casing was hand-driven from 390 to 485 cm 50 mm Ø Stainless steel screen 425 - 485 cm Stainless Steel Drive Point

EOH



APPENDIX C  
CALIBRATION CURVES FOR INSTRUMENTATION

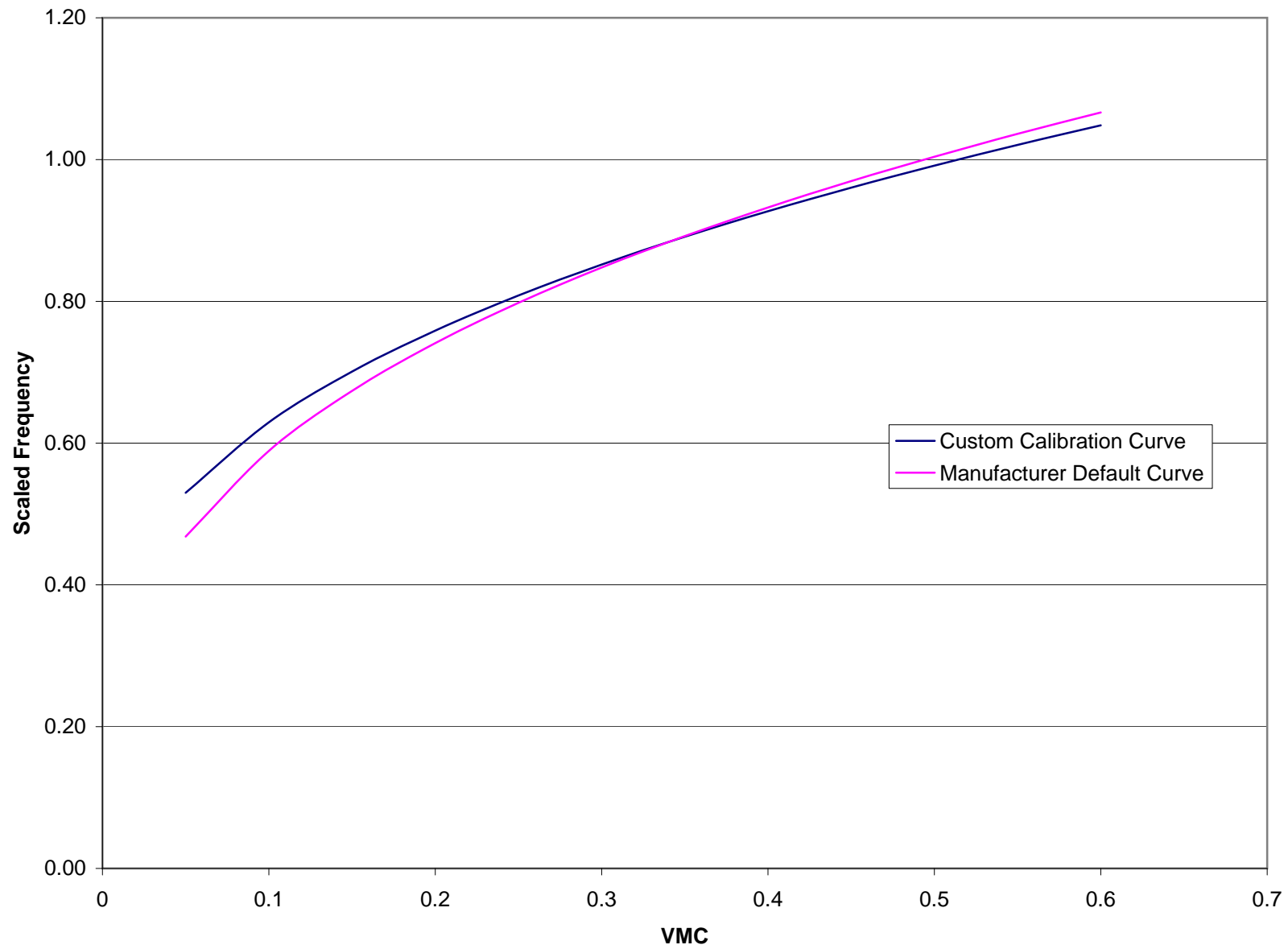


Figure B1 - Diviner calibration curve for till

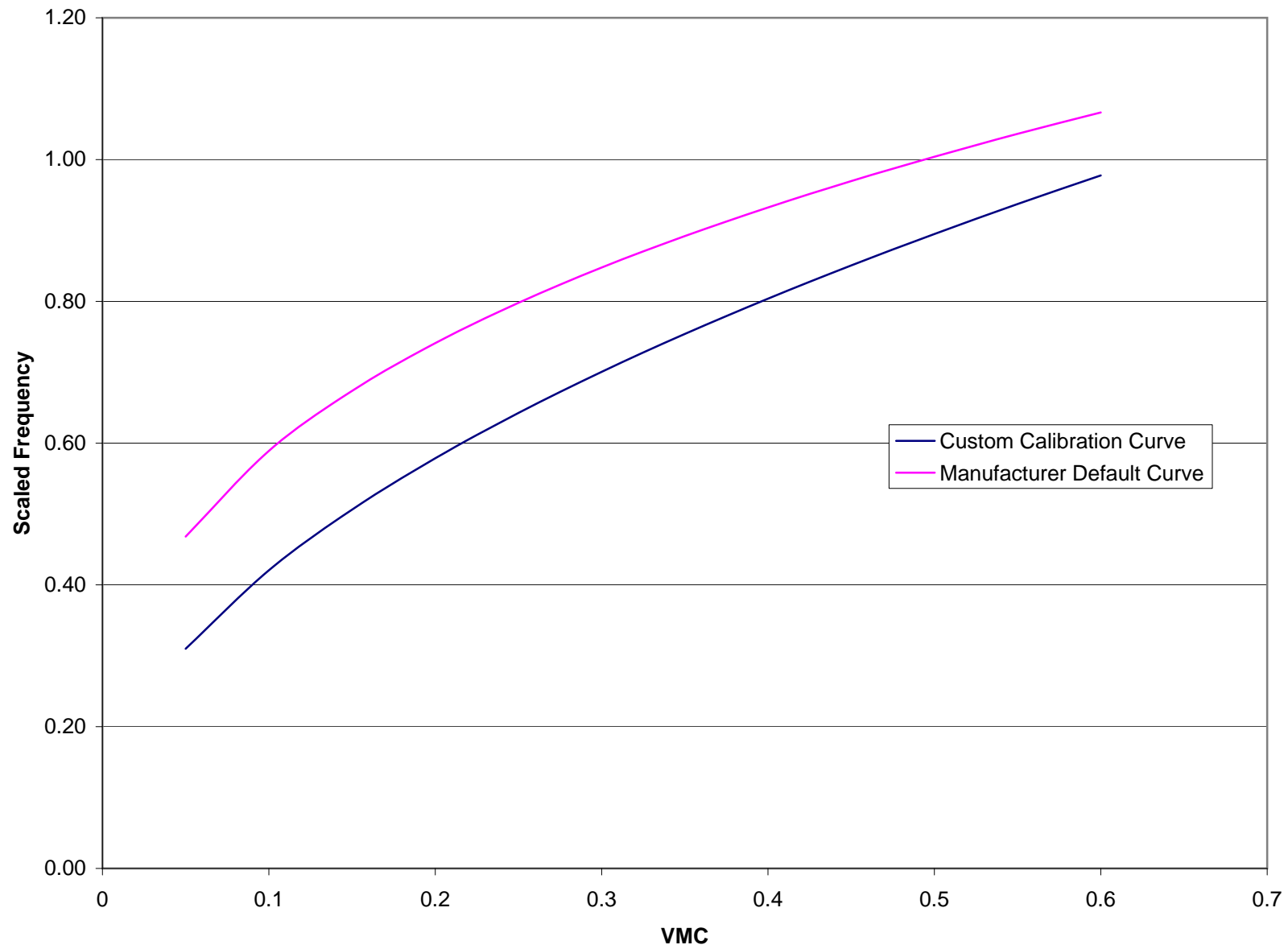


Figure B2 - Diviner calibration curve for peat

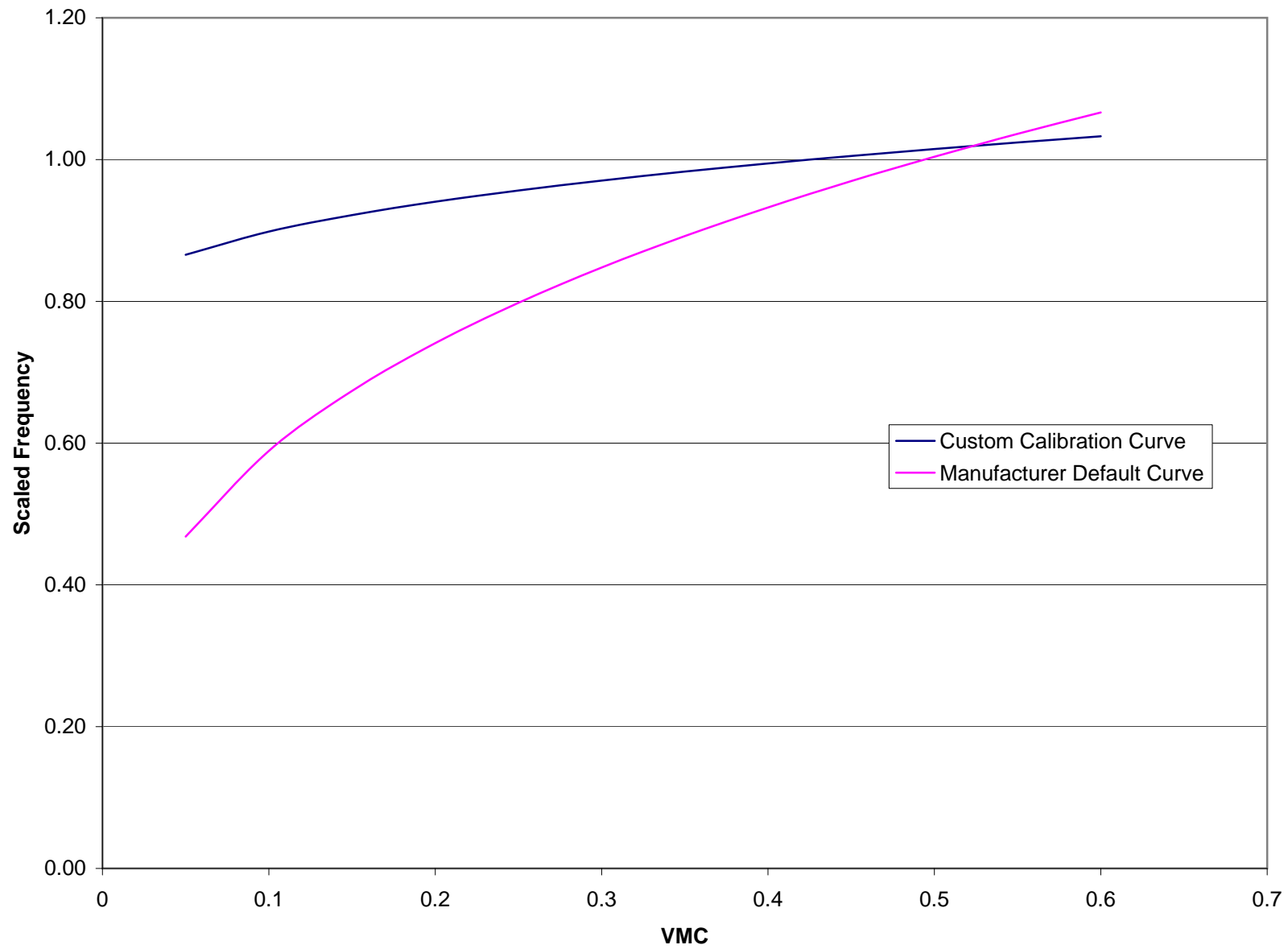


Figure B3 - Diviner calibration curve for coke

APPENDIX D  
MANUAL MEASUREMENTS - SOIL TEMPERATURE AND GAS PROFILE DATA

Syncrude Coke Watershed Manual Gas and Temperature Profile Data

ID	Depth (m)	04-Jun-05			02-Jun-05			08-Jun-05			17-Jun-05			28-Jun-05			07-Jul-05		
		O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)
<b>GPS050402</b> (GPS2)	0.2	18.1	0.8	19.0	17.6	1.4	20.2	16.6	0.9	14.9	16.2	1.4	16.1	12.1	2.6	20.6			
	0.4	14.1	0.8	16.6	13.6	1.2	18.6	13.3	0.8	15.7	11.5	0.8	14.9	8.8	1.4	19.9			
	1.4	9.7	0.4	9.6	9.2	0.8	9.9	9.3	0.8	12.5	8.1	0.8	13.7	6.4	0.8	14.8			
	2.4	4.3	0.6	10.8	1.7	0.8	10.5	2.8	0.6	12.3	2.4	0.6	13.0	1.5	0.8	13.9			
	3.4	0.0	0.4	14.3	0.0	0.6	13.8	0.0	0.5	14.1	0.0	0.6	14.6	0.0	0.6	15.2			
	4.4	0.0	0.5	17.1	0.0	0.8	15.9	0.0	0.6	16.7	0.0	0.6	16.3	0.0	0.7	16.2			
	4.7	0.0	0.8	17.2	0.0	1.2	15.8	0.0	0.6	16.6	0.0	0.8	16.7	0.0	0.9	17.1			
<b>GPS050401</b> (GPS1)	0.2	18.9	0.4	20.6	16.2	0.8	23.4	11.2	0.7	15.2	12.6	1.4	16.7	7.4	2.4	21.0			
	0.4	10.2	0.6	19.1	9.9	0.8	20.4	8.5	0.6	15.8	7.0	0.6	16.0	5.2	0.8	20.4			
	1.3	7.0	0.2	7.1	6.7	0.5	8.2	5.9	0.4	11.5	4.5	0.4	12.5	3.6	0.6	13.4			
	2.3	1.7	0.0	7.6	0.9	0.2	7.5	0.0	0.6	8.8	0.3	0.2	9.9	0.3	0.2	11.0			
	3.3	0.0	0.0	9.9	0.0	0.3	9.4	0.0	0.1	9.6	0.0	0.2	10.0	0.0	0.2	10.4			
<b>GPD050403</b> (GPD3)	0.3	4.8	0.6	14.3	0.7	1.0	17.5	0.0	0.8	13.6	0.9	1.4	15.8	0.0	2.6	18.6			
	0.95	0.6	0.3	#N/A	0.1	0.8	#N/A	0.0	0.6	#N/A	0.0	0.6	#N/A	0.0	0.8	#N/A			
	1.2	0.4	0.3	6.2	0.1	0.6	10.0	0.0	0.2	12.5	0.0	0.5	13.1	0.0	0.6	15.7			
	2.3	0.0	0.0	4.1	0.0	0.3	4.0	0.0	0.1	5.5	0.0	0.2	7.1	0.0	0.2	8.2			
	3.4	0.0	0.0	7.4	0.0	0.2	7.1	0.0	0.0	7.4	0.0	0.0	7.6	0.0	0.1	7.9			
<b>GPD050404</b> (GPD4)	0.2							17.9	1.4	13.4	18.5	1.9	14.7	10.2	3.7	18.7			
	0.9							15.0	1.0	13.1	8.7	1.2	13.7	1.0	1.0	16.5			
	1.3							8.9	0.8	10.0	4.2	0.8	11.7	0.9	0.8	13.7			
	2.3							5.0	0.4	5.7	2.5	0.6	8.0	0.0	0.4	9.1			
	3.3							2.4	0.4	9.1	0.1	0.4	9.4	0.0	0.4	9.4			
	3.9							0.3	0.2	10.6	0.0	0.2	10.4	0.0	0.4	10.7			
	4.2							0.0	0.1	10.8	0.0	0.2	10.9	0.0	0.4	10.9			
<b>GPS040460</b> (Shallow lysimeter)	0.6	19.6	0.7	-	19.6	0.8	-	18.9	0.6	-	17.8	0.6	-	16.6	0.9	-			
	0.9	19.7	0.6	-	19.4	0.8	-	18.6	0.6	-	17.5	0.6	-	16.3	0.9	-			
	1.5	19.0	0.6	-	18.7	0.6	-	18.1	0.6	-	16.7	0.7	-	16.0	0.8	-			
	2.0	18.7	0.6	-	18.7	0.6	-	18	0.6	-	16.6	0.6	-	15.7	0.8	-			
	2.5	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-			
<b>GP040461</b> (Deep lysimeter)	1.3	13.1	0.6	-	12.0	0.8	-	10.9	0.7	-	9.6	0.8	-	7.5	1.0	-			
	2.0	12.6	0.6	-	11.6	0.8	-	10.6	0.7	-	9.2	0.8	-	7.5	0.9	-			
	2.5	11.5	0.6	-	10.9	0.6	-	10.5	0.4	-	8.8	0.6	-	7.4	0.7	-			
	3.0	10.8	0.6	-	10.7	0.5	-	10.3	0.4	-	8.7	0.5	-	7.4	0.6	-			

Syncrude Coke Watershed Manual Gas and Temperature Profile Data

ID	Depth (m)	14-Jul-05			19-Jul-05			27-Jul-05			05-Aug-05			11-Aug-05		
		O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)
<b>GPS050402</b> (GPS2)	0.2	16.4	1.8	22.0	12.6	2.2	19.6	10.8	0.2	15.8	15.6	1.6	19.6	16.2	0.8	18.7
	0.4	11.1	1.7	20.8	9.1	1.6	19.6	7.1	1.0	16.9	9.5	1.3	18.8	11.6	1.0	19.5
	1.4	6.6	1.1	15.2	6.7	1.2	15.9	6.0	0.8	16.0	5.1	1.0	16.9	6.1	0.8	17.9
	2.4	1.5	0.8	13.9	1.5	0.9	14.2	1.7	0.8	13.8	0.9	0.8	15.7	0.9	0.6	16.6
	3.4	0.0	0.6	14.9	0.0	0.6	15.2	0.0	0.6	15.2	0.0	0.6	15.5	0.0	0.4	16.3
	4.4	0.0	0.8	16.1	0.0	0.8	16.2	0.1	0.5	16.0	0.0	0.6	16.3	0.0	0.4	16.9
	4.7	0.0	0.8	16.6	0.0	0.8	16.3	0.0	0.6	16.8	0.1	0.8	16.3	0.0	0.6	17.1
<b>GPS050401</b> (GPS1)	0.2	13.1	1.9	22.2	3.2	1.6	20.1	1.9	1.6	15.9	9.3	2	18.7	12.7	1.0	18.8
	0.4	6.6	1.2	21.9	4.9	0.9	20.1	3.0	0.6	15.8	5.1	0.8	18.3	6.5	0.7	19.2
	1.3	3.7	0.6	14	3.7	0.6	15.1	2.6	0.5	16.1	2.7	0.6	15.5	3.4	0.4	16.7
	2.3	0.3	0.3	11.1	0.1	0.2	11.6	0.4	0.2	12.2	0.1	0.2	12.3	0.0	0.1	13.7
	3.3	0.0	0.2	10.4	#N/A	#N/A	10.4	#N/A	#N/A	11.1	#N/A	#N/A	10.4	#N/A	#N/A	11.4
<b>GPD050403</b> (GPD3)	0.3	1.6	4.6	20.2	0.0	4.4	19.3	1.2	2.6	15.6	0.0	1.0	17.8	3.5	5.0	18.7
	0.95	0.0	0.8	#N/A	0.0	0.8	#N/A	0.0	0.8	#N/A	0.0	0.8	#N/A	0.0	0.6	#N/A
	1.2	0.0	0.8	17.4	0.0	0.8	18.1	0.0	0.7	17.4	0.0	0.7	16.6	0.0	0.6	18.2
	2.3	0.0	0.4	9.4	0.0	0.2	9.3	0.0	0.2	10.6	0.0	0.2	10.9	0.0	0	12.6
	3.4	0.0	0.2	8.1	0.0	0.1	7.8	0.0	0.0	8.0	0.0	0.0	8.1	0.0	0.0	9.9
<b>GPD050404</b> (GPD4)	0.2	18.6	1.3	19.1	14.4	2.5	18.3	7.9	3.6	15.7	16.5	2.2	17.5	19.3	0.8	17.4
	0.9	2.1	1.6	18.3	2.5	1.9	18.4	1.6	1.2	16.8	1.0	1.1	17.2	4.5	1.8	18.2
	1.3	1.8	1.0	15.6	1.2	1.3	16.3	1.4	1.0	16.1	0.7	0.8	15.8	1.9	1.0	16.7
	2.3	0.0	0.6	10.1	0.8	0.7	9.5	0.0	0.4	10.9	0.0	0.4	11.8	0.1	0.6	12.5
	3.3	0.0	0.6	9.8	0.0	0.4	9.1	0.0	0.4	9.9	0.0	0.2	10.0	0.0	0.4	10.8
	3.9	0.0	0.5	10.5	0.0	0.4	9.7	0.0	0.2	10.1	0.0	0.2	10.1	0.0	0.2	11.0
	4.2	0.0	0.5	11.3	0.0	0.4	10.3	0.0	0.2	10.8	0.0	0.2	10.5	0.0	0.2	11.1
<b>GPS040460</b> (Shallow lysimeter)	0.6	17.7	1.1	-	15.4	0.8	-	13.2	0.8	-	15.9	0.0	-	17.1	0.8	-
	0.9	17.4	1	-	15.5	1.0	-	13.2	0.8	-	15.6	0.8	-	16.7	0.7	-
	1.5	16.3	0.8	-	15.9	0.9	-	13.5	0.8	-	14.1	0.8	-	15.3	0.7	-
	2.0	15.9	0.8	-	15.9	0.8	-	13.7	0.6	-	13.6	0.8	-	14.7	0.6	-
	2.5	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-
<b>GP040461</b> (Deep lysimeter)	1.3	8.4	1.3	-	6.5	1.2	-	5.6	0.8	-	6.0	0.8	-	6.1	0.8	-
	2.0	8.1	1.2	-	6.5	1.0	-	5.5	0.8	-	5.8	0.8	-	5.7	0.8	-
	2.5	7.2	0.8	-	6.6	0.8	-	5.9	0.8	-	4.9	0.6	-	4.6	0.6	-
	3.0	7	0.6	-	6.6	0.6	-	6.0	0.6	-	4.6	0.6	-	4.2	0.6	-

Syncrude Coke Watershed Manual Gas and Temperature Profile Data

ID	Depth (m)	19-Aug-05			31-Aug-05			11-Sep-05			20-Sep-05			05-Oct-05		
		O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)
<b>GPS050402</b> (GPS2)	0.2	13.2	1.1	13.6	15.3	1.1	15.9	17.7	0.8	15.3	18.4	0.6	13.3	19.5	0.2	7.1
	0.4	10.2	1.0	15.5	11.0	1.2	17.3	13.2	1.1	16.1	14.5	0.8	14.3	16.7	0.6	10.1
	1.4	6.9	0.9	17.8	6.6	1.0	17.9	7.5	1.2	18.1	8.2	1.0	17.6	11.0	1.0	17.5
	2.4	1.2	0.8	16.6	1.2	0.8	16.8	1.3	1.0	17.6	1.6	0.9	17.7	2.9	0.8	18.3
	3.4	0.0	0.5	16.3	0.0	0.6	17.0	0.0	0.6	17.5	0.0	0.6	16.9	0.0	0.6	17.7
	4.4	0.0	0.5	16.7	0.0	0.6	17.0	0.0	0.6	17.3	0.0	0.5	16.9	0.0	0.5	17.7
	4.7	0.0	0.6	16.9	0.9	0.6	17.2	0.0	0.6	17.2	0.1	0.6	16.8	0.0	0.6	17.6
<b>GPS050401</b> (GPS1)	0.2	5.1	0.8	13.5	6.3	1.5	15.6	12.4	1.1	15.4	15.0	0.6	12.8	15.4	0.4	7.5
	0.4	5.6	0.6	14.5	5.2	0.8	17.5	6.9	0.8	15.4	8.2	0.6	13.7	9.4	0.6	8.1
	1.3	3.9	0.6	16.3	3.5	0.6	16.3	4.0	0.6	16.1	4.9	0.6	15.4	6.3	0.6	14.5
	2.3	0.0	0.2	13.8	0.0	0.2	14.5	0.1	0.2	14.3	0.3	0.2	14.2	0.4	0.3	14.6
	3.3	#N/A	#N/A	11.5	#N/A	#N/A	12.2	#N/A	#N/A	12.2	#N/A	#N/A	12.0	#N/A	#N/A	12.5
<b>GPD050403</b> (GPD3)	0.3	2.4	4.6	14.9	2.8	5.4	16.0	7.5	5.4	15.2	10.4	4.2	13.4	9.3	2.2	9.4
	0.95	0.0	0.8	#N/A	0.0	0.8	#N/A	0.1	0.8	#N/A	0.1	0.8	#N/A	1.0	0.7	#N/A
	1.2	0.0	0.7	16.9	0.0	0.8	16.8	0.1	0.8	15.4	0.0	0.6	14.1	0.9	0.6	11.9
	2.3	0.0	0.2	12.7	0.0	0.3	13.2	0.0	0.4	12.8	0.0	0.4	12.8	0.0	0.4	13.1
	3.4	0.0	0.0	10.2	0.0	0.0	10.7	0.0	0.0	10.9	0.0	0.0	10.4	0.0	0.0	11.5
<b>GPD050404</b> (GPD4)	0.2	11.2	1.8	15.1	15.2	1.9	15.5	16.4	1.3	13.7	19.5	0.5	12.0	19.3	0.2	7.2
	0.9	2.1	1.4	16.8	3.1	1.6	16.8	2.5	1.4	14.8	7.2	1.4	13.5	6.9	0.9	10.6
	1.3	1.1	1.0	16.6	1.5	1.0	16.4	1.9	1.2	15.7	2.4	1.0	14.6	4.8	0.8	13.2
	2.3	0.1	0.6	13.6	0.1	0.6	13.3	0.0	0.6	13.1	0.4	0.8	13.9	0.5	0.8	13.8
	3.3	0.0	0.4	11.6	0.0	0.4	11.7	0.0	0.6	11.7	0.0	0.4	12.2	0.0	0.4	13.0
	3.9	0.0	0.2	11.6	0.0	0.2	11.4	0.0	0.4	11.4	0.0	0.3	11.8	0.0	0.3	12.4
	4.2	0.0	0.2	12.0	0.0	0.2	11.4	0.0	0.4	11.3	0.0	0.2	11.6	0.0	0.2	12.4
<b>GPS040460</b> (Shallow lysimeter)	0.6	16.0	0.8	-	16.0	0.8	-	17.2	0.8	-	18.1	0.6	-	18.7	0.6	-
	0.9	16.0	0.8	-	15.7	0.8	-	16.9	0.8	-	17.7	0.8	-	18.3	0.6	-
	1.5	15.5	0.8	-	15.1	0.8	-	15.6	0.8	-	16.5	0.8	-	16.9	0.8	-
	2.0	15.3	0.8	-	14.7	0.8	-	15.2	1.0	-	15.8	0.9	-	16.0	1.0	-
	2.5	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-
<b>GP040461</b> (Deep lysimeter)	1.3	5.5	0.8	-	6.0	1.0	-	7.2	1.0	-	8.4	0.8	-	10.0	0.8	-
	2.0	5.5	0.8	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-
	2.5	4.5	0.8	-	4.4	0.8	-	5.1	0.8	-	5.8	0.8	-	7.7	0.8	-
	3.0	4.2	0.6	-	3.9	0.6	-	4.4	0.8	-	4.9	0.8	-	6.7	0.8	-



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ID	Depth (m)	20-Oct-05			22-Nov-05			14-Feb-06			24-Apr-06			11-May-06		
		O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)
<b>GPS050402</b> (GPS2)	0.2	20.0	0.2	5.9	19.3	0.2	1.3	-	-	-6.4	18.5	0.6	7.6			
	0.4	17.5	0.6	8.2	17.2	0.4	3	-	-	-6.3	16.3	0.6	5.9	15.9	0.8	10.7
	1.4	11.1	1.0	15.5	12.1	0.8	12.7	-	-	2.8	12.1	0.6	4.7	12.7	0.7	7.7
	2.4	3.0	1.0	17.6	2.9	0.9	16.7	-	-	8.3	4.8	0.8	9.4	5.7	0.8	10.0
	3.4	0.0	0.6	17.4	0.0	0.6	17.4	-	-	10.4	0.6	0.6	12.6	0.7	0.6	12.9
	4.4	0.0	0.6	16.9	0.0	0.6		-	-	10.3	0.1	0.6	14.9	0.1	0.6	15.0
	4.7	0.0	0.6	16.9	0.1	0.7	16.7	-	-	12	0.0	0.8	14.9	0.1	0.6	14.8
<b>GPS050401</b> (GPS1)	0.2	17.0	0.3	6.7	14.5	0.2	1.1	-	-	-7.2	15.3	0.4	7.8	12.4	0.8	12.5
	0.4	10.8	0.4	8.0	11.8	0.4	2.2	-	-	-8.0	11.5	0.4	6.4	10.6	0.6	12.1
	1.3	7.2	0.6	13.9	8.5	0.4	9.9	-	-	0.3	8.2	0.3	2.6	8.4	0.4	6.4
	2.3	0.4	0.2	15.2	0.9	0.2	13.3	-	-	5.5	1.8	0.2	7.1	2.2	0.2	7.9
	3.3	#N/A	#N/A	13.7	#N/A	#N/A	12.9	-	-	6.6	0.6	0.1	9.1	0.7	0.2	10.1
<b>GPD050403</b> (GPD3)	0.3	16.3	1.2	7.8	11.8	0.4	1.7	-	-	-3.6	7.4	0.4	2.5	6.8	0.8	8.4
	0.95	1.5	0.6	#N/A	2.1	0.4	#N/A	-	-	---	1.7	0.2	---	1.3	0.4	#N/A
	1.2	1.2	0.6	10.4	1.8	0.4	4.2	-	-	-2.4	1.5	0.2	0.3	1.2	0.4	5
	2.3	0.0	0.4	12.9	0.1	0.2	10.5	-	-	3.6	0.4	0.1	5.1	0.3	0.1	4.5
	3.4	0.0	0.0	11.8	0.2	0.0	11.2	-	-	6.5	0.0	0	8.2	0.4	0.0	6.8
<b>GPD050404</b> (GPD4)	0.2	20.5	0.2	6.7	18.0	0.0	1.1	-	-	-1.8	18.6	0.4	3.3			
	0.9	10.7	0.8	8.8	7.5	0.6	2.5	-	-	-0.2	8.1	0.6	-0.4	7.9	0.8	5.2
	1.3	5.4	0.8	11.5	6.7	0.6	5.3	-	-	2.1	7.8	0.6	0.6	7.4	0.6	2.9
	2.3	1.9	0.8	14.0	0.7	0.6	10.8	-	-	6.4	1.7	0.5	4.9	3.0	0.6	4.7
	3.3	0.0	0.4	13.5	0.0	0.4	12.0	-	-	9.0	0.0	0.4	8.2	0.0	0.4	7.1
	3.9	0.0	0.3	13.4	0.0	0.2	11.8	-	-	10.0	0.0	0.4	9.2	0.0	0.4	8.9
	4.2	0.0	0.3	12.8	0.0	0.2	12.0	-	-	10.2	0.0	0.4	10.0	0.7	0.4	9.3
<b>GPS040460</b> (Shallow lysimeter)	0.6	18.9	0.4	-	18.8	0.3	-	-	-	-	18.6	0.6	-	18.3	0.8	-
	0.9	18.6	0.6	-	18.7	0.4	-	-	-	-	18.4	0.6	-	18.3	0.8	-
	1.5	17.5	0.8	-	18.1	0.6	-	-	-	-	17.6	0.5	-	18.2	0.6	-
	2.0	16.9	0.8	-	17.7	0.8	-	-	-	-	17.0	0.6	-	18.1	0.6	-
	2.5	#N/A	#N/A	-	#N/A	#N/A	-	-	-	-	#N/A	#N/A	-	#N/A	#N/A	-
<b>GP040461</b> (Deep lysimeter)	1.3	11.2	0.6	-	12.1	0.4	-	-	-	-	12.6	0.4	-	13.3	0.5	-
	2.0	#N/A	#N/A	-	#N/A	#N/A	-	-	-	-	#N/A	#N/A	-	#N/A	#N/A	-
	2.5	8.8	0.8	-	10.9	0.6	-	-	-	-	11.5	0.4	-	12.4	0.4	-
	3.0	8.2	0.8	-	10.4	0.8	-	-	-	-	10.9	0.5	-	12.1	0.5	-

Syncrude Coke Watershed Manual Gas and Temperature Profile Data

ID	Depth (m)	25-May-06			06-Jun-06			21-Jun-06			07-Jul-06			25-Jul-06		
		O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)
<b>GPS050402</b> (GPS2)	0.2	18.6	0.6	13.9	19.8	0.4	17.6	17.0	0.8	20.6	#N/A	#N/A		19.2	1.1	24.0
	0.4	16.6	0.8	14.5	18.4	0.8	16.7	16.5	0.8	20.4	18.3	0.6	22.4	16.7	1.4	22.9
	1.4	12.5	0.6	11.2	13.6	0.8	12.5	12.5	0.9	14.4	12.5	0.8	15.5	10.5	1.8	17.7
	2.4	5.1	0.7	11.9	7.0	0.8	13.0	5.7	0.8	13.4	4.6	0.8	14.1	3.9	1.4	16.0
	3.4	0.7	0.4	14.3	0.6	0.6	14.2	0.5	0.5	4.4	0.6	0.4	14.2	0.4	0.8	15.7
	4.4	0.4	0.4	15.7	1.0	0.5	\	0.0	0.5	15.4	0.0	0.4	15.1	0.1	0.6	15.0
	4.7	0.1	0.6	16	0.1	0.6	15.7	0.0	0.6	15.5	0.0	0.4	14.2	0.1	0.8	15.1
<b>GPS050401</b> (GPS1)	0.2	14.8	0.6	14.8	17.4	0.6	18.9	10.9	1.2	20.9				17.2	0.8	24.4
	0.4	11.4	0.6	15.0	13.3	0.8	18.8	11.1	0.8	21.4	13.9	0.8	24.1	10.8	1.5	24.0
	1.3	8.4	0.4	10.4	9.3	0.6	12.3	9.1	0.6	14.8	9.1	0.8	16.7	6.5	1.1	18.1
	2.3	2.2	0.2	9.7	2.5	0.2	10.7	2.4	0.3	12.0	4.1	0.2	14.6	1.2	0.6	14.5
	3.3	2.3	0	10.9	10.5	0.1	10.8	0.3	0.1	11.4	8.5	0	10.7	0.3	0.4	12.0
<b>GPD050403</b> (GPD3)	0.3	8.2	1.8	13.0	\	\	16.8	11.7	2.0	19.6	15.9	1.6	23.2	13.2	3.6	23.6
	0.95	0.4	0.5	---	2.4	0.8	#N/A	0.4	0.8	#N/A	1.2	1.2	#N/A	0.0	1.6	#N/A
	1.2	0.6	0.4	11.7	1.3	0.6	14.4	0.3	0.8	17.5	2.7	0.8	20.2	0.0	1.4	20.6
	2.3	0.3	0.2	6.9	0.2	0.2	7.8	0.0	0.2	9.5	0.0	0.3	10.4	0.0	0.6	13.4
	3.4	0.3	0	8.5	2.7	0.2	8.2	0.0	0.0	9.0	0.9	0.0	8.3	0.0	0.3	10.4
<b>GPD050404</b> (GPD4)	0.2	18.1	0.8	13.6	20.1	0.5	16.2	18.0	0.9	19.7	19.6	0.3		19.3	0.2	22.7
	0.9	7.0	0.8	12.9	9.1	1.4	14.7	8.1	1.5	18.7	7.9	1.7	20.2	6.6	2.4	22.0
	1.3	6.4	0.8	10.6	6.9	1.0	8.0	5.6	1.2	15.4	6.7	1.4	17.5	4.4	2.3	19.1
	2.3	2.9	0.5	7.7	6.0	0.6	10.4	2.9	0.6	10.0	2.4	0.6	10.7	2.8	1.0	13.9
	3.3	0.0	0.4	9.5	0.4	0.4	8.7	0.1	0.4	9.6	0.6	0.4	9.3	0.0	0.6	11.2
	3.9	0.0	0.2	11.1	0.3	0.4	14.7	0.0	0.3	10.3	0.3	0.2	9.9	0.0	0.6	11.3
	4.2	0.0	0.2	11.6	0.7	0.4	19.6	0.0	0.2	10.8	0.0	0.2	10.2	1.7	0.4	11.0
<b>GPS040460</b> (Shallow lysimeter)	0.6	18.9	0.6	-	18.7	0.8	-	18.1	0.8	-	19.3	0.6	-	18.6	1.0	-
	0.9	18.7	0.6	-	18.8	0.8	-	18.1	0.8	-	18.1	0.7	-	18.3	1.2	-
	1.5	18.4	0.6	-	18.3	0.8	-	17.9	0.8	-	17.7	0.8	-	16.9	1.1	-
	2.0	18.3	0.6	-	17.8	0.6	-	17.8	0.6	-	20.7	0.0	-	16.4	1.2	-
	2.5	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-	19	0.8	-	#N/A	#N/A	-
<b>GP040461</b> (Deep lysimeter)	1.3	13.4	0.6	-	15.9	0.7	-	13.5	0.9	-	15.0	0.9	-	12.9	1.6	-
	2.0	#N/A	#N/A	-	20.5	0	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-
	2.5	12.9	0.6	-	13.8	0.6	-	12.9	0.8	-	13.5	0.8	-	11.6	1.4	-
	3.0	12.4	0.6	-	12.7	0.6	-	12.5	0.6	-	13.9	0.6	-	11.3	1.2	-

Syncrude Coke Watershed Manual Gas and Temperature Profile Data

ID	Depth (m)	09-Aug-06			29-Aug-06			20-Sep-06			24-Oct-06		
		O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)	O <sub>2</sub> (%)	CO <sub>2</sub> (%)	Temp (°C)
<b>GPS050402</b> (GPS2)	0.2	18.7	1.2	20.8	19.0	0.4	19.9	19.0	0.2	12.1	19.1	0	3.5
	0.4	16.9	1.3	20.2	16.0	0.8	20.1	16.8	0.6	14.4	17.7	0.3	3.3
	1.4	10.9	2.0	18.9	10.1	1.5	19.7	11.1	1.4	20.1	11.5	1.0	14.9
	2.4	4.4	1.5	16.9	2.7	1.2	18.2	3.3	1.2	19.5	3.0	1.0	18.0
	3.4	1.4	0.8	15.9	0.3	0.6	16.9	0.2	0.6	18.1	0.1	0.6	17.5
	4.4	3.0	0.6		0.0	0.4	15.8	0.0	0.4	16.7	0.0	0.4	15.2
	4.7	2.0	0.8	15.5	0.0	0.6	15.7	0.0	0.5	16.2	0.0	0.4	15.6
<b>GPS050401</b> (GPS1)	0.2				16.7	0.6	20.2	14.7	0.4	11.1	17.0	0.1	3.3
	0.4	10.9	1.2	20.8	11.2	0.8	21.2	11.4	0.6	13.2	13.0	0.4	5.3
	1.3	6.5	1.2	18.6	6.6	0.8	19.4	7.5	0.8	18.8	9.0	0.5	13.6
	2.3	1.6	0.6	15.8	1.2	0.4	16.9	1.3	0.4	17.3	1.8	0.4	16.7
	3.3	6.3	0.2	12.7	0.3	0.1	13.8	0.2	0	14.2	0.3	0	14.6
<b>GPD050403</b> (GPD3)	0.3	14.8	2.8	19.2	13.8	2.1	20.0	8.7	1.0	13.1	13.3	0.5	5.5
	0.95	1.5	1.4	#N/A	0.6	1.1	#N/A	1.0	0.8	#N/A	2.1	0.6	#N/A
	1.2	1.7	1.2	18.5	0.5	0.9	19.1	0.9	0.8	16.7	1.9	0.5	8.3
	2.3	1.3	0.6	13.2	0.0	0.4	14.8	0.0	0.4	15.1	0.1	0.4	13.8
	3.4	1.3	0.2	9.8	0.0	0.0	12.0	0.0	0.0	12.1	0.0	0.1	12.7
<b>GPD050404</b> (GPD4)	0.2	17.6	1.2	19.2	18.6	0.6	18.2	17.1	0.3	12.8	18.7	0.0	4.3
	0.9	7.6	1.8	17.9	5.6	1.4	18.4	6.6	1.0	15.5	8.6	0.6	6.4
	1.3	4.9	1.8	17.2	4.0	1.4	17.6	5.2	1.4	17.0	7.3	0.8	9.9
	2.3	2.5	0.9	13.7	0.5	0.8	14.4	0.4	0.8	15.9	1.0	0.8	14.3
	3.3	7.6	0.4	10.9	0.0	0.4	12.1	0.0	0.4	13.4	0.0	0.4	13.7
	3.9	1.3	0.3	10.2	0.0	0.2	11.0	0.0	0.2	12.3	0.0	0.2	12.6
	4.2	1.8	0.3	10.4	0.0	0.2	10.9	0.0	0.2	11.9	0.0	0.2	12.4
<b>GPS040460</b> (Shallow lysimeter)	0.6	18.1	1.1	-	18.4	0.8	-	18.2	0.4	-	19.1	0.2	-
	0.9	17.7	1.2	-	18.0	0.8	-	18.0	0.5	-	18.8	0.3	-
	1.5	16.7	1.4	-	16.8	1	-	17.0	0.8	-	17.9	0.6	-
	2.0	16.2	1.4	-	16.2	1.1	-	16.6	0.9	-	17.2	0.8	-
	2.5	20.9	0.1	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-
<b>GP040461</b> (Deep lysimeter)	1.3	20.2	0.2	-	12.0	1.1	-	12.2	0.8	-	13.3	0.6	-
	2.0	20.7	0.1	-	#N/A	#N/A	-	#N/A	#N/A	-	#N/A	#N/A	-
	2.5	20.5	0.1	-	10.4	1.2	-	11.1	1	-	12	0.8	-
	3.0	10.6	1	-	9.9	1	-	10.6	1	-	11.5	0.9	-

SYNCRUDE COKE WATERSHED  
AUTOMATED SOIL STATION DATA

DEEP COVER

Soil Water Content  
Soil Temperature  
Soil Matric Suction

SHALLOW COVER

Soil Water Content  
Soil Temperature  
Soil Matric Suction

METEOROLOGICAL STATION DATA

## **Deep Cover - Water Content Data**

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	12/04/2005	0.461	0.407	0.148	0.129	0.179	0.139	0.187	0.279
1759	12/04/2005	0.443	0.409	0.15	0.13	0.18	0.14	0.187	0.281
2359	12/04/2005	0.444	0.419	0.15	0.13	0.18	0.14	0.187	0.28
559	13/04/2005	0.442	0.415	0.151	0.13	0.18	0.14	0.187	0.28
1159	13/04/2005	0.448	0.418	0.152	0.13	0.18	0.14	0.187	0.279
1759	13/04/2005	0.45	0.422	0.153	0.13	0.18	0.14	0.187	0.279
2359	13/04/2005	0.449	0.428	0.155	0.131	0.181	0.14	0.187	0.28
559	14/04/2005	0.448	0.429	0.156	0.131	0.181	0.14	0.187	0.28
1159	14/04/2005	0.449	0.43	0.157	0.131	0.182	0.141	0.187	0.28
1759	14/04/2005	0.49	0.521	0.16	0.132	0.182	0.141	0.187	0.28
2359	14/04/2005	0.486	0.528	0.167	0.132	0.182	0.141	0.187	0.28
559	15/04/2005	0.496	0.559	0.177	0.132	0.182	0.141	0.187	0.28
1159	15/04/2005	0.49	0.599	0.188	0.133	0.187	0.141	0.187	0.278
1759	15/04/2005	0.467	0.666	0.22	0.168	0.191	0.142	0.187	0.28
2359	15/04/2005	0.465	0.676	0.229	0.197	0.193	0.142	0.187	0.28
559	16/04/2005	0.463	0.649	0.231	0.218	0.194	0.143	0.187	0.28
1159	16/04/2005	0.477	0.723	0.245	0.217	0.195	0.143	0.187	0.279
1759	16/04/2005	0.454	0.697	0.257	0.22	0.197	0.144	0.187	0.281
2359	16/04/2005	0.457	0.706	0.257	0.22	0.198	0.145	0.187	0.28
559	17/04/2005	0.46	0.72	0.259	0.219	0.198	0.145	0.187	0.279
1159	17/04/2005	0.453	0.709	0.26	0.22	0.198	0.145	0.187	0.279
1759	17/04/2005	0.435	0.662	0.261	0.222	0.2	0.147	0.188	0.282
2359	17/04/2005	0.441	0.643	0.261	0.221	0.2	0.146	0.188	0.28
559	18/04/2005	0.444	0.638	0.261	0.222	0.201	0.147	0.188	0.28
1159	18/04/2005	0.441	0.634	0.261	0.221	0.2	0.147	0.188	0.279
1759	18/04/2005	0.418	0.594	0.262	0.222	0.202	0.148	0.188	0.28
2359	18/04/2005	0.427	0.583	0.265	0.222	0.202	0.148	0.188	0.28
559	19/04/2005	0.431	0.573	0.27	0.222	0.202	0.148	0.188	0.279
1159	19/04/2005	0.429	0.574	0.271	0.22	0.201	0.148	0.188	0.278
1759	19/04/2005	0.409	0.536	0.271	0.222	0.203	0.15	0.189	0.281
2359	19/04/2005	0.413	0.523	0.273	0.223	0.204	0.15	0.189	0.281
559	20/04/2005	0.418	0.521	0.274	0.223	0.204	0.15	0.189	0.28
1159	20/04/2005	0.408	0.51	0.273	0.221	0.203	0.15	0.189	0.28
1759	20/04/2005	0.387	0.477	0.268	0.222	0.204	0.151	0.189	0.281
2359	20/04/2005	0.394	0.47	0.264	0.223	0.205	0.151	0.19	0.281
559	21/04/2005	0.4	0.473	0.262	0.222	0.205	0.151	0.19	0.28
1159	21/04/2005	0.394	0.468	0.26	0.221	0.204	0.151	0.19	0.279
1759	21/04/2005	0.376	0.449	0.259	0.223	0.206	0.152	0.19	0.281
2359	21/04/2005	0.382	0.439	0.257	0.222	0.206	0.152	0.19	0.281
559	22/04/2005	0.388	0.44	0.255	0.222	0.205	0.152	0.19	0.28
1159	22/04/2005	0.379	0.432	0.251	0.22	0.204	0.151	0.19	0.277
1759	22/04/2005	0.362	0.415	0.251	0.223	0.207	0.153	0.191	0.281
2359	22/04/2005	0.365	0.405	0.249	0.221	0.207	0.153	0.191	0.281
559	23/04/2005	0.371	0.408	0.248	0.226	0.207	0.153	0.191	0.28
1159	23/04/2005	0.366	0.407	0.246	0.24	0.206	0.153	0.191	0.279
1759	23/04/2005	0.352	0.394	0.245	0.25	0.207	0.154	0.192	0.281
2359	23/04/2005	0.361	0.389	0.244	0.255	0.207	0.154	0.192	0.28
559	24/04/2005	0.366	0.394	0.243	0.255	0.207	0.154	0.192	0.28
1159	24/04/2005	0.363	0.395	0.242	0.254	0.207	0.154	0.192	0.279
1759	24/04/2005	0.344	0.379	0.241	0.254	0.208	0.155	0.192	0.281
2359	24/04/2005	0.351	0.373	0.24	0.253	0.208	0.155	0.192	0.28
559	25/04/2005	0.358	0.377	0.239	0.252	0.208	0.155	0.192	0.28
1159	25/04/2005	0.356	0.377	0.236	0.25	0.206	0.154	0.192	0.278
1759	25/04/2005	0.341	0.368	0.238	0.251	0.209	0.156	0.193	0.281
2359	25/04/2005	0.344	0.361	0.236	0.25	0.209	0.156	0.193	0.28
559	26/04/2005	0.348	0.362	0.235	0.25	0.209	0.156	0.193	0.28
1159	26/04/2005	0.347	0.362	0.233	0.248	0.208	0.155	0.193	0.279
1759	26/04/2005	0.34	0.358	0.233	0.248	0.209	0.156	0.194	0.279
2359	26/04/2005	0.341	0.354	0.232	0.247	0.209	0.156	0.194	0.279
559	27/04/2005	0.338	0.347	0.23	0.246	0.209	0.156	0.194	0.279
1159	27/04/2005	0.334	0.342	0.229	0.245	0.209	0.156	0.194	0.279
1759	27/04/2005	0.335	0.351	0.229	0.244	0.209	0.157	0.195	0.279
2359	27/04/2005	0.333	0.345	0.229	0.244	0.21	0.157	0.195	0.279
559	28/04/2005	0.316	0.333	0.227	0.243	0.21	0.157	0.195	0.279
1159	28/04/2005	0.302	0.32	0.224	0.24	0.209	0.156	0.195	0.277
1759	28/04/2005	0.305	0.321	0.225	0.241	0.21	0.157	0.195	0.28
2359	28/04/2005	0.307	0.321	0.224	0.24	0.21	0.157	0.195	0.278
559	29/04/2005	0.3	0.319	0.224	0.239	0.211	0.157	0.196	0.279
1159	29/04/2005	0.283	0.31	0.222	0.237	0.21	0.157	0.196	0.278
1759	29/04/2005	0.28	0.305	0.222	0.237	0.211	0.158	0.196	0.279
2359	29/04/2005	0.275	0.302	0.221	0.236	0.211	0.158	0.196	0.279
559	30/04/2005	0.26	0.296	0.22	0.235	0.211	0.158	0.197	0.279

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	30/04/2005	0.246	0.289	0.218	0.233	0.21	0.158	0.197	0.278
1759	30/04/2005	0.246	0.286	0.219	0.234	0.212	0.158	0.197	0.279
2359	30/04/2005	0.246	0.286	0.218	0.233	0.212	0.159	0.198	0.28
559	01/05/2005	0.244	0.286	0.217	0.232	0.212	0.159	0.198	0.279
1159	01/05/2005	0.236	0.283	0.216	0.23	0.212	0.159	0.198	0.278
1759	01/05/2005	0.235	0.282	0.217	0.23	0.213	0.159	0.199	0.279
2359	01/05/2005	0.238	0.284	0.216	0.23	0.213	0.16	0.199	0.279
559	02/05/2005	0.239	0.285	0.216	0.229	0.213	0.159	0.199	0.279
1159	02/05/2005	0.239	0.285	0.215	0.228	0.213	0.159	0.199	0.278
1759	02/05/2005	0.242	0.29	0.216	0.228	0.213	0.16	0.2	0.28
2359	02/05/2005	0.256	0.301	0.217	0.228	0.214	0.16	0.2	0.28
559	03/05/2005	0.254	0.299	0.216	0.227	0.213	0.16	0.2	0.278
1159	03/05/2005	0.256	0.298	0.216	0.227	0.213	0.16	0.2	0.278
1759	03/05/2005	0.262	0.307	0.218	0.228	0.215	0.161	0.201	0.28
2359	03/05/2005	0.263	0.303	0.219	0.229	0.215	0.161	0.202	0.28
559	04/05/2005	0.263	0.3	0.218	0.228	0.214	0.161	0.202	0.278
1159	04/05/2005	0.262	0.3	0.218	0.229	0.214	0.161	0.202	0.279
1759	04/05/2005	0.258	0.296	0.219	0.23	0.214	0.161	0.203	0.279
2359	04/05/2005	0.259	0.293	0.22	0.232	0.216	0.162	0.204	0.281
559	05/05/2005	0.259	0.291	0.218	0.232	0.215	0.162	0.203	0.278
1159	05/05/2005	0.258	0.291	0.217	0.232	0.214	0.161	0.204	0.278
1759	05/05/2005	0.264	0.291	0.22	0.234	0.216	0.162	0.205	0.28
2359	05/05/2005	0.275	0.307	0.22	0.233	0.215	0.162	0.205	0.279
559	06/05/2005	0.275	0.312	0.222	0.234	0.216	0.162	0.206	0.279
1159	06/05/2005	0.271	0.312	0.222	0.234	0.216	0.162	0.206	0.278
1759	06/05/2005	0.264	0.307	0.223	0.235	0.217	0.163	0.207	0.28
2359	06/05/2005	0.263	0.302	0.223	0.236	0.217	0.163	0.208	0.28
559	07/05/2005	0.263	0.298	0.22	0.234	0.216	0.162	0.207	0.277
1159	07/05/2005	0.265	0.299	0.221	0.234	0.216	0.163	0.208	0.278
1759	07/05/2005	0.26	0.297	0.222	0.235	0.218	0.164	0.209	0.28
2359	07/05/2005	0.261	0.293	0.222	0.235	0.219	0.164	0.21	0.28
559	08/05/2005	0.262	0.292	0.22	0.234	0.218	0.163	0.21	0.279
1159	08/05/2005	0.262	0.293	0.219	0.233	0.218	0.164	0.211	0.279
1759	08/05/2005	0.259	0.291	0.221	0.234	0.22	0.164	0.212	0.28
2359	08/05/2005	0.259	0.287	0.22	0.234	0.221	0.164	0.213	0.279
559	09/05/2005	0.259	0.287	0.219	0.233	0.222	0.164	0.214	0.279
1159	09/05/2005	0.257	0.285	0.217	0.231	0.222	0.163	0.214	0.277
1759	09/05/2005	0.255	0.286	0.218	0.233	0.226	0.165	0.215	0.279
2359	09/05/2005	0.256	0.284	0.218	0.233	0.229	0.165	0.216	0.279
559	10/05/2005	0.253	0.283	0.217	0.231	0.233	0.165	0.216	0.278
1159	10/05/2005	0.253	0.283	0.216	0.231	0.24	0.165	0.217	0.278
1759	10/05/2005	0.252	0.283	0.217	0.231	0.245	0.165	0.218	0.279
2359	10/05/2005	0.253	0.282	0.217	0.231	0.248	0.166	0.219	0.279
559	11/05/2005	0.254	0.281	0.216	0.23	0.249	0.165	0.22	0.278
1159	11/05/2005	0.254	0.282	0.215	0.229	0.251	0.165	0.22	0.278
1759	11/05/2005	0.253	0.282	0.217	0.231	0.255	0.167	0.222	0.28
2359	11/05/2005	0.254	0.281	0.218	0.231	0.256	0.167	0.223	0.281
559	12/05/2005	0.254	0.278	0.216	0.229	0.256	0.166	0.222	0.278
1159	12/05/2005	0.254	0.279	0.216	0.229	0.259	0.167	0.223	0.279
1759	12/05/2005	0.254	0.281	0.218	0.231	0.264	0.169	0.225	0.283
2359	12/05/2005	0.253	0.278	0.216	0.229	0.265	0.168	0.224	0.279
559	13/05/2005	0.253	0.277	0.215	0.228	0.271	0.168	0.224	0.278
1159	13/05/2005	0.253	0.278	0.215	0.227	0.275	0.168	0.224	0.279
1759	13/05/2005	0.253	0.278	0.216	0.228	0.277	0.169	0.225	0.28
2359	13/05/2005	0.254	0.277	0.216	0.228	0.277	0.17	0.226	0.28
559	14/05/2005	0.253	0.275	0.215	0.227	0.276	0.169	0.225	0.278
1159	14/05/2005	0.254	0.277	0.214	0.227	0.276	0.17	0.226	0.279
1759	14/05/2005	0.254	0.277	0.216	0.228	0.277	0.171	0.227	0.28
2359	14/05/2005	0.255	0.276	0.216	0.228	0.278	0.172	0.227	0.281
559	15/05/2005	0.254	0.275	0.216	0.227	0.277	0.172	0.227	0.28
1159	15/05/2005	0.254	0.275	0.214	0.225	0.275	0.172	0.227	0.279
1759	15/05/2005	0.254	0.275	0.216	0.226	0.276	0.174	0.228	0.281
2359	15/05/2005	0.254	0.274	0.216	0.226	0.276	0.176	0.229	0.281
559	16/05/2005	0.254	0.274	0.216	0.226	0.275	0.178	0.229	0.281
1159	16/05/2005	0.253	0.273	0.214	0.224	0.272	0.183	0.228	0.279
1759	16/05/2005	0.253	0.273	0.215	0.225	0.272	0.19	0.229	0.28
2359	16/05/2005	0.253	0.272	0.216	0.225	0.272	0.199	0.229	0.281
559	17/05/2005	0.253	0.271	0.215	0.224	0.271	0.21	0.229	0.28
1159	17/05/2005	0.252	0.271	0.213	0.222	0.269	0.216	0.229	0.279
1759	17/05/2005	0.253	0.272	0.213	0.223	0.27	0.22	0.23	0.28
2359	17/05/2005	0.252	0.272	0.214	0.223	0.27	0.222	0.232	0.28
559	18/05/2005	0.253	0.272	0.214	0.223	0.27	0.224	0.233	0.281

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	18/05/2005	0.261	0.272	0.213	0.222	0.269	0.225	0.235	0.28
1759	18/05/2005	0.36	0.355	0.22	0.221	0.269	0.225	0.238	0.28
2359	18/05/2005	0.353	0.37	0.245	0.226	0.269	0.226	0.242	0.28
559	19/05/2005	0.342	0.365	0.243	0.232	0.27	0.227	0.245	0.281
1159	19/05/2005	0.333	0.358	0.24	0.233	0.271	0.227	0.247	0.279
1759	19/05/2005	0.32	0.349	0.239	0.233	0.273	0.229	0.25	0.28
2359	19/05/2005	0.318	0.342	0.237	0.233	0.275	0.231	0.253	0.281
559	20/05/2005	0.317	0.34	0.235	0.232	0.274	0.231	0.255	0.281
1159	20/05/2005	0.305	0.338	0.233	0.231	0.274	0.231	0.256	0.28
1759	20/05/2005	0.305	0.33	0.233	0.231	0.275	0.233	0.258	0.282
2359	20/05/2005	0.304	0.324	0.232	0.232	0.275	0.233	0.26	0.282
559	21/05/2005	0.301	0.321	0.229	0.229	0.273	0.232	0.259	0.28
1159	21/05/2005	0.297	0.322	0.227	0.228	0.273	0.232	0.26	0.281
1759	21/05/2005	0.3	0.32	0.231	0.232	0.277	0.236	0.264	0.286
2359	21/05/2005	0.296	0.311	0.227	0.228	0.273	0.233	0.26	0.282
559	22/05/2005	0.297	0.314	0.226	0.228	0.273	0.233	0.26	0.282
1159	22/05/2005	0.294	0.315	0.225	0.226	0.272	0.232	0.259	0.281
1759	22/05/2005	0.295	0.311	0.226	0.227	0.273	0.233	0.26	0.283
2359	22/05/2005	0.294	0.306	0.225	0.227	0.272	0.233	0.26	0.282
559	23/05/2005	0.291	0.305	0.223	0.225	0.271	0.232	0.258	0.281
1159	23/05/2005	0.288	0.305	0.222	0.224	0.27	0.232	0.257	0.281
1759	23/05/2005	0.289	0.304	0.222	0.225	0.272	0.233	0.258	0.283
2359	23/05/2005	0.285	0.3	0.222	0.224	0.271	0.232	0.257	0.282
559	24/05/2005	0.284	0.3	0.221	0.224	0.271	0.232	0.257	0.282
1159	24/05/2005	0.283	0.301	0.22	0.223	0.27	0.232	0.256	0.282
1759	24/05/2005	0.282	0.301	0.221	0.224	0.271	0.233	0.257	0.283
2359	24/05/2005	0.282	0.299	0.219	0.223	0.27	0.232	0.256	0.282
559	25/05/2005	0.282	0.3	0.219	0.223	0.27	0.232	0.256	0.283
1159	25/05/2005	0.289	0.301	0.219	0.222	0.27	0.232	0.255	0.282
1759	25/05/2005	0.295	0.309	0.219	0.222	0.269	0.231	0.254	0.281
2359	25/05/2005	0.295	0.313	0.22	0.222	0.27	0.232	0.255	0.283
559	26/05/2005	0.295	0.315	0.221	0.222	0.269	0.232	0.255	0.283
1159	26/05/2005	0.292	0.314	0.22	0.221	0.268	0.231	0.253	0.282
1759	26/05/2005	0.289	0.311	0.221	0.222	0.269	0.232	0.254	0.283
2359	26/05/2005	0.291	0.308	0.222	0.223	0.269	0.233	0.255	0.284
559	27/05/2005	0.287	0.304	0.219	0.221	0.266	0.23	0.252	0.281
1159	27/05/2005	0.287	0.307	0.22	0.222	0.268	0.232	0.253	0.283
1759	27/05/2005	0.285	0.303	0.221	0.222	0.268	0.232	0.253	0.284
2359	27/05/2005	0.286	0.299	0.221	0.223	0.269	0.232	0.253	0.284
559	28/05/2005	0.283	0.297	0.218	0.22	0.266	0.23	0.251	0.281
1159	28/05/2005	0.282	0.298	0.219	0.221	0.267	0.231	0.252	0.283
1759	28/05/2005	0.28	0.296	0.219	0.222	0.268	0.232	0.252	0.284
2359	28/05/2005	0.281	0.293	0.22	0.223	0.269	0.233	0.253	0.285
559	29/05/2005	0.279	0.29	0.218	0.22	0.266	0.231	0.25	0.283
1159	29/05/2005	0.277	0.291	0.217	0.22	0.266	0.23	0.25	0.283
1759	29/05/2005	0.275	0.289	0.219	0.221	0.268	0.232	0.251	0.285
2359	29/05/2005	0.276	0.287	0.22	0.222	0.269	0.233	0.252	0.286
559	30/05/2005	0.274	0.284	0.217	0.219	0.266	0.23	0.249	0.282
1159	30/05/2005	0.273	0.285	0.217	0.22	0.266	0.231	0.25	0.284
1759	30/05/2005	0.269	0.283	0.218	0.221	0.267	0.231	0.25	0.285
2359	30/05/2005	0.271	0.281	0.219	0.221	0.268	0.232	0.251	0.287
559	31/05/2005	0.27	0.279	0.216	0.219	0.266	0.23	0.248	0.284
1159	31/05/2005	0.268	0.279	0.215	0.218	0.265	0.23	0.248	0.283
1759	31/05/2005	0.264	0.278	0.217	0.22	0.267	0.231	0.249	0.285
2359	31/05/2005	0.267	0.277	0.218	0.221	0.268	0.232	0.25	0.287
559	01/06/2005	0.266	0.275	0.215	0.218	0.265	0.23	0.247	0.284
1159	01/06/2005	0.265	0.275	0.214	0.217	0.265	0.229	0.247	0.284
1759	01/06/2005	0.264	0.274	0.215	0.219	0.267	0.23	0.248	0.285
2359	01/06/2005	0.265	0.273	0.216	0.219	0.267	0.231	0.248	0.286
559	02/06/2005	0.265	0.272	0.214	0.217	0.266	0.229	0.246	0.284
1159	02/06/2005	0.263	0.272	0.213	0.216	0.265	0.229	0.245	0.284
1759	02/06/2005	0.261	0.271	0.214	0.217	0.266	0.23	0.246	0.286
2359	02/06/2005	0.262	0.271	0.215	0.218	0.267	0.231	0.247	0.287
559	03/06/2005	0.262	0.27	0.213	0.216	0.265	0.229	0.245	0.285
1159	03/06/2005	0.26	0.27	0.212	0.216	0.264	0.229	0.244	0.284
1759	03/06/2005	0.265	0.269	0.214	0.217	0.266	0.23	0.246	0.286
2359	03/06/2005	0.269	0.268	0.214	0.218	0.267	0.231	0.246	0.288
559	04/06/2005	0.268	0.267	0.212	0.216	0.265	0.229	0.244	0.285
1159	04/06/2005	0.267	0.268	0.212	0.215	0.264	0.228	0.243	0.285
1759	04/06/2005	0.265	0.268	0.213	0.216	0.265	0.229	0.244	0.286
2359	04/06/2005	0.266	0.267	0.213	0.217	0.266	0.23	0.244	0.287
559	05/06/2005	0.266	0.266	0.212	0.215	0.264	0.228	0.243	0.285



MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	05/06/2005	0.265	0.267	0.211	0.214	0.264	0.228	0.242	0.285
1759	05/06/2005	0.264	0.266	0.213	0.216	0.266	0.23	0.244	0.288
2359	05/06/2005	0.266	0.265	0.213	0.216	0.266	0.229	0.243	0.288
559	06/06/2005	0.266	0.265	0.212	0.215	0.265	0.229	0.243	0.287
1159	06/06/2005	0.265	0.265	0.211	0.215	0.264	0.229	0.242	0.287
1759	06/06/2005	0.261	0.263	0.211	0.214	0.263	0.228	0.241	0.286
2359	06/06/2005	0.265	0.264	0.213	0.216	0.266	0.23	0.243	0.289
559	07/06/2005	0.264	0.262	0.21	0.213	0.263	0.227	0.24	0.286
1159	07/06/2005	0.262	0.262	0.21	0.213	0.263	0.227	0.24	0.286
1759	07/06/2005	0.261	0.262	0.212	0.215	0.265	0.229	0.242	0.289
2359	07/06/2005	0.263	0.261	0.212	0.215	0.265	0.229	0.242	0.29
559	08/06/2005	0.263	0.26	0.21	0.213	0.263	0.227	0.239	0.287
1159	08/06/2005	0.26	0.26	0.208	0.211	0.261	0.226	0.238	0.285
1759	08/06/2005	0.258	0.259	0.21	0.213	0.263	0.228	0.239	0.288
2359	08/06/2005	0.26	0.259	0.211	0.214	0.265	0.228	0.24	0.29
559	09/06/2005	0.261	0.259	0.21	0.214	0.264	0.228	0.24	0.289
1159	09/06/2005	0.259	0.259	0.21	0.213	0.264	0.228	0.239	0.289
1759	09/06/2005	0.253	0.256	0.209	0.212	0.262	0.227	0.238	0.288
2359	09/06/2005	0.256	0.257	0.21	0.213	0.264	0.228	0.239	0.291
559	10/06/2005	0.255	0.257	0.208	0.212	0.263	0.227	0.238	0.289
1159	10/06/2005	0.253	0.256	0.207	0.211	0.262	0.226	0.237	0.288
1759	10/06/2005	0.253	0.256	0.209	0.212	0.263	0.227	0.238	0.291
2359	10/06/2005	0.253	0.256	0.209	0.212	0.263	0.227	0.238	0.291
559	11/06/2005	0.252	0.255	0.207	0.21	0.261	0.226	0.236	0.289
1159	11/06/2005	0.253	0.256	0.207	0.21	0.262	0.226	0.236	0.29
1759	11/06/2005	0.253	0.256	0.208	0.211	0.262	0.227	0.237	0.291
2359	11/06/2005	0.252	0.256	0.208	0.211	0.262	0.227	0.237	0.291
559	12/06/2005	0.252	0.256	0.207	0.21	0.262	0.226	0.236	0.291
1159	12/06/2005	0.252	0.256	0.207	0.21	0.262	0.226	0.236	0.291
1759	12/06/2005	0.253	0.255	0.207	0.21	0.261	0.226	0.236	0.291
2359	12/06/2005	0.254	0.256	0.207	0.21	0.261	0.226	0.236	0.292
559	13/06/2005	0.256	0.257	0.207	0.21	0.262	0.226	0.236	0.292
1159	13/06/2005	0.259	0.257	0.207	0.21	0.262	0.227	0.236	0.292
1759	13/06/2005	0.263	0.26	0.208	0.211	0.262	0.227	0.236	0.294
2359	13/06/2005	0.271	0.262	0.208	0.211	0.262	0.227	0.236	0.293
559	14/06/2005	0.277	0.267	0.209	0.211	0.262	0.227	0.236	0.293
1159	14/06/2005	0.288	0.272	0.208	0.209	0.26	0.225	0.234	0.29
1759	14/06/2005	0.297	0.281	0.213	0.212	0.263	0.228	0.237	0.295
2359	14/06/2005	0.296	0.282	0.213	0.212	0.262	0.227	0.236	0.293
559	15/06/2005	0.297	0.284	0.214	0.212	0.261	0.227	0.235	0.293
1159	15/06/2005	0.331	0.291	0.214	0.211	0.26	0.226	0.234	0.291
1759	15/06/2005	0.335	0.302	0.219	0.213	0.261	0.227	0.235	0.292
2359	15/06/2005	0.328	0.307	0.225	0.214	0.262	0.227	0.235	0.293
559	16/06/2005	0.326	0.309	0.227	0.215	0.262	0.227	0.235	0.293
1159	16/06/2005	0.321	0.31	0.227	0.216	0.262	0.227	0.235	0.292
1759	16/06/2005	0.316	0.306	0.228	0.218	0.263	0.227	0.235	0.293
2359	16/06/2005	0.31	0.304	0.228	0.22	0.264	0.229	0.236	0.295
559	17/06/2005	0.306	0.302	0.225	0.218	0.263	0.227	0.235	0.292
1159	17/06/2005	0.307	0.303	0.225	0.219	0.264	0.228	0.236	0.294
1759	17/06/2005	0.379	0.312	0.225	0.219	0.264	0.228	0.235	0.294
2359	17/06/2005	0.372	0.309	0.225	0.219	0.265	0.229	0.236	0.295
559	18/06/2005	0.366	0.307	0.222	0.217	0.262	0.226	0.234	0.291
1159	18/06/2005	0.377	0.309	0.222	0.218	0.263	0.227	0.235	0.292
1759	18/06/2005	0.366	0.303	0.222	0.218	0.264	0.228	0.235	0.293
2359	18/06/2005	0.362	0.302	0.223	0.219	0.265	0.229	0.236	0.295
559	19/06/2005	0.357	0.3	0.22	0.216	0.263	0.227	0.234	0.291
1159	19/06/2005	0.371	0.303	0.221	0.218	0.265	0.229	0.236	0.294
1759	19/06/2005	0.365	0.3	0.221	0.218	0.265	0.229	0.236	0.294
2359	19/06/2005	0.357	0.299	0.221	0.219	0.266	0.23	0.236	0.295
559	20/06/2005	0.352	0.296	0.217	0.216	0.262	0.227	0.234	0.29
1159	20/06/2005	0.369	0.3	0.218	0.217	0.264	0.228	0.235	0.293
1759	20/06/2005	0.359	0.294	0.219	0.217	0.265	0.229	0.236	0.294
2359	20/06/2005	0.351	0.292	0.22	0.218	0.266	0.23	0.236	0.295
559	21/06/2005	0.348	0.291	0.218	0.216	0.264	0.228	0.235	0.293
1159	21/06/2005	0.356	0.29	0.216	0.215	0.262	0.227	0.234	0.291
1759	21/06/2005	0.353	0.289	0.218	0.217	0.265	0.229	0.236	0.294
2359	21/06/2005	0.346	0.287	0.218	0.217	0.265	0.229	0.236	0.295
559	22/06/2005	0.342	0.286	0.215	0.215	0.263	0.227	0.234	0.292
1159	22/06/2005	0.349	0.288	0.216	0.216	0.264	0.228	0.235	0.293
1759	22/06/2005	0.576	0.377	0.219	0.216	0.264	0.228	0.235	0.293
2359	22/06/2005	0.528	0.395	0.246	0.221	0.264	0.228	0.235	0.293
559	23/06/2005	0.511	0.392	0.245	0.228	0.267	0.228	0.235	0.293

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	23/06/2005	0.53	0.41	0.249	0.233	0.27	0.229	0.235	0.293
1759	23/06/2005	0.517	0.412	0.25	0.236	0.275	0.231	0.235	0.292
2359	23/06/2005	0.487	0.402	0.247	0.236	0.278	0.235	0.238	0.293
559	24/06/2005	0.466	0.392	0.243	0.233	0.276	0.235	0.239	0.291
1159	24/06/2005	0.485	0.39	0.243	0.233	0.276	0.236	0.242	0.292
1759	24/06/2005	0.453	0.371	0.242	0.233	0.278	0.238	0.244	0.293
2359	24/06/2005	0.432	0.361	0.24	0.233	0.277	0.238	0.246	0.293
559	25/06/2005	0.427	0.358	0.237	0.231	0.276	0.237	0.246	0.293
1159	25/06/2005	0.432	0.359	0.236	0.23	0.276	0.238	0.246	0.293
1759	25/06/2005	0.423	0.352	0.234	0.229	0.275	0.236	0.245	0.291
2359	25/06/2005	0.414	0.351	0.235	0.23	0.276	0.238	0.247	0.294
559	26/06/2005	0.408	0.346	0.232	0.228	0.274	0.236	0.245	0.292
1159	26/06/2005	0.418	0.345	0.23	0.227	0.274	0.236	0.245	0.292
1759	26/06/2005	0.408	0.335	0.23	0.226	0.273	0.235	0.245	0.292
2359	26/06/2005	0.396	0.332	0.231	0.227	0.274	0.237	0.246	0.293
559	27/06/2005	0.387	0.329	0.227	0.225	0.272	0.235	0.244	0.291
1159	27/06/2005	0.401	0.33	0.227	0.225	0.272	0.235	0.244	0.293
1759	27/06/2005	0.396	0.326	0.229	0.226	0.274	0.236	0.246	0.295
2359	27/06/2005	0.383	0.321	0.228	0.225	0.273	0.236	0.245	0.296
559	28/06/2005	0.371	0.316	0.224	0.222	0.27	0.233	0.242	0.293
1159	28/06/2005	0.386	0.319	0.225	0.223	0.271	0.234	0.244	0.297
1759	28/06/2005	0.39	0.318	0.226	0.224	0.272	0.235	0.244	0.3
2359	28/06/2005	0.406	0.324	0.225	0.223	0.271	0.234	0.243	0.301
559	29/06/2005	0.407	0.333	0.226	0.223	0.271	0.234	0.243	0.302
1159	29/06/2005	0.411	0.335	0.226	0.222	0.27	0.234	0.242	0.303
1759	29/06/2005	0.411	0.333	0.228	0.223	0.272	0.235	0.244	0.306
2359	29/06/2005	0.389	0.328	0.228	0.224	0.272	0.235	0.243	0.307
559	30/06/2005	0.383	0.325	0.226	0.222	0.27	0.233	0.242	0.305
1159	30/06/2005	0.398	0.325	0.225	0.221	0.269	0.232	0.241	0.305
1759	30/06/2005	0.39	0.32	0.227	0.223	0.271	0.234	0.242	0.308
2359	30/06/2005	0.374	0.315	0.227	0.223	0.272	0.235	0.243	0.309
559	01/07/2005	0.365	0.311	0.223	0.221	0.269	0.232	0.24	0.305
1159	01/07/2005	0.382	0.312	0.223	0.22	0.268	0.232	0.24	0.306
1759	01/07/2005	0.379	0.31	0.225	0.222	0.271	0.234	0.242	0.309
2359	01/07/2005	0.362	0.306	0.224	0.222	0.27	0.234	0.241	0.309
559	02/07/2005	0.354	0.304	0.221	0.219	0.268	0.231	0.239	0.305
1159	02/07/2005	0.373	0.306	0.221	0.219	0.268	0.232	0.24	0.307
1759	02/07/2005	0.394	0.306	0.223	0.221	0.271	0.234	0.241	0.31
2359	02/07/2005	0.455	0.363	0.233	0.223	0.274	0.235	0.245	0.307
559	03/07/2005	0.443	0.363	0.236	0.225	0.274	0.235	0.246	0.306
1159	03/07/2005	0.449	0.362	0.235	0.225	0.273	0.234	0.244	0.305
1759	03/07/2005	0.443	0.356	0.236	0.226	0.274	0.235	0.244	0.307
2359	03/07/2005	0.427	0.355	0.237	0.227	0.275	0.235	0.244	0.311
559	04/07/2005	0.419	0.353	0.235	0.227	0.274	0.234	0.243	0.314
1159	04/07/2005	0.427	0.352	0.234	0.226	0.273	0.234	0.242	0.317
1759	04/07/2005	0.416	0.343	0.234	0.227	0.274	0.235	0.242	0.319
2359	04/07/2005	0.396	0.336	0.234	0.227	0.275	0.235	0.242	0.32
559	05/07/2005	0.384	0.332	0.23	0.225	0.272	0.233	0.24	0.316
1159	05/07/2005	0.403	0.33	0.229	0.224	0.272	0.233	0.24	0.316
1759	05/07/2005	0.398	0.326	0.231	0.226	0.274	0.235	0.241	0.319
2359	05/07/2005	0.379	0.32	0.23	0.225	0.274	0.234	0.241	0.318
559	06/07/2005	0.4	0.322	0.228	0.224	0.273	0.234	0.24	0.316
1159	06/07/2005	0.413	0.33	0.228	0.224	0.272	0.233	0.239	0.316
1759	06/07/2005	0.406	0.329	0.23	0.225	0.274	0.235	0.24	0.318
2359	06/07/2005	0.417	0.339	0.23	0.224	0.272	0.233	0.238	0.316
559	07/07/2005	0.407	0.341	0.23	0.222	0.27	0.232	0.237	0.312
1159	07/07/2005	0.416	0.343	0.231	0.223	0.271	0.232	0.237	0.313
1759	07/07/2005	0.407	0.34	0.233	0.225	0.273	0.234	0.238	0.316
2359	07/07/2005	0.387	0.332	0.231	0.224	0.272	0.233	0.237	0.314
559	08/07/2005	0.377	0.328	0.228	0.222	0.27	0.232	0.236	0.311
1159	08/07/2005	0.39	0.327	0.227	0.222	0.27	0.232	0.236	0.311
1759	08/07/2005	0.38	0.322	0.228	0.223	0.271	0.232	0.236	0.312
2359	08/07/2005	0.367	0.317	0.228	0.223	0.271	0.233	0.236	0.312
559	09/07/2005	0.363	0.315	0.226	0.222	0.271	0.232	0.236	0.311
1159	09/07/2005	0.366	0.313	0.224	0.221	0.269	0.231	0.234	0.308
1759	09/07/2005	0.368	0.314	0.225	0.222	0.271	0.232	0.235	0.311
2359	09/07/2005	0.356	0.31	0.225	0.223	0.272	0.233	0.236	0.312
559	10/07/2005	0.35	0.308	0.222	0.22	0.269	0.231	0.234	0.308
1159	10/07/2005	0.366	0.307	0.221	0.22	0.269	0.231	0.234	0.307
1759	10/07/2005	0.359	0.303	0.222	0.22	0.269	0.231	0.234	0.307
2359	10/07/2005	0.346	0.301	0.222	0.221	0.27	0.232	0.235	0.309
559	11/07/2005	0.342	0.299	0.22	0.219	0.268	0.231	0.233	0.305

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	11/07/2005	0.358	0.299	0.219	0.218	0.268	0.23	0.233	0.304
1759	11/07/2005	0.347	0.299	0.222	0.221	0.271	0.233	0.235	0.31
2359	11/07/2005	0.338	0.294	0.221	0.219	0.27	0.232	0.234	0.307
559	12/07/2005	0.333	0.292	0.218	0.217	0.267	0.23	0.232	0.303
1159	12/07/2005	0.349	0.292	0.217	0.216	0.267	0.229	0.232	0.303
1759	12/07/2005	0.335	0.289	0.218	0.218	0.269	0.231	0.233	0.305
2359	12/07/2005	0.33	0.286	0.219	0.218	0.269	0.231	0.233	0.305
559	13/07/2005	0.333	0.287	0.218	0.218	0.269	0.231	0.233	0.304
1159	13/07/2005	0.346	0.287	0.216	0.216	0.267	0.23	0.232	0.302
1759	13/07/2005	0.338	0.286	0.218	0.217	0.268	0.231	0.232	0.304
2359	13/07/2005	0.331	0.286	0.218	0.217	0.269	0.231	0.233	0.304
559	14/07/2005	0.328	0.284	0.216	0.216	0.267	0.23	0.231	0.301
1159	14/07/2005	0.341	0.284	0.215	0.214	0.266	0.229	0.23	0.3
1759	14/07/2005	0.333	0.281	0.215	0.214	0.266	0.229	0.23	0.299
2359	14/07/2005	0.325	0.279	0.216	0.216	0.268	0.231	0.232	0.303
559	15/07/2005	0.32	0.278	0.214	0.214	0.266	0.229	0.23	0.299
1159	15/07/2005	0.333	0.277	0.213	0.213	0.265	0.228	0.23	0.299
1759	15/07/2005	0.323	0.276	0.215	0.215	0.268	0.23	0.231	0.302
2359	15/07/2005	0.316	0.273	0.214	0.215	0.267	0.23	0.23	0.3
559	16/07/2005	0.315	0.273	0.214	0.214	0.266	0.229	0.23	0.299
1159	16/07/2005	0.319	0.273	0.214	0.214	0.267	0.23	0.23	0.3
1759	16/07/2005	0.316	0.27	0.212	0.213	0.266	0.229	0.229	0.298
2359	16/07/2005	0.31	0.27	0.213	0.214	0.267	0.23	0.23	0.299
559	17/07/2005	0.307	0.269	0.211	0.212	0.265	0.228	0.229	0.296
1159	17/07/2005	0.317	0.268	0.21	0.211	0.264	0.228	0.228	0.296
1759	17/07/2005	0.313	0.267	0.212	0.214	0.267	0.23	0.23	0.299
2359	17/07/2005	0.316	0.265	0.211	0.213	0.266	0.229	0.229	0.297
559	18/07/2005	0.335	0.269	0.211	0.212	0.265	0.228	0.229	0.296
1159	18/07/2005	0.352	0.274	0.212	0.213	0.267	0.23	0.229	0.298
1759	18/07/2005	0.369	0.277	0.212	0.211	0.264	0.227	0.228	0.294
2359	18/07/2005	0.436	0.306	0.221	0.218	0.266	0.228	0.228	0.296
559	19/07/2005	0.455	0.331	0.227	0.221	0.27	0.229	0.228	0.295
1159	19/07/2005	0.44	0.342	0.231	0.222	0.271	0.231	0.228	0.294
1759	19/07/2005	0.415	0.336	0.233	0.224	0.273	0.232	0.231	0.295
2359	19/07/2005	0.405	0.333	0.234	0.225	0.273	0.233	0.232	0.295
559	20/07/2005	0.403	0.332	0.232	0.224	0.272	0.232	0.232	0.294
1159	20/07/2005	0.419	0.331	0.231	0.223	0.271	0.232	0.232	0.294
1759	20/07/2005	0.393	0.322	0.231	0.224	0.273	0.233	0.233	0.296
2359	20/07/2005	0.377	0.318	0.23	0.224	0.273	0.233	0.234	0.296
559	21/07/2005	0.372	0.317	0.228	0.223	0.272	0.232	0.233	0.295
1159	21/07/2005	0.385	0.315	0.226	0.222	0.271	0.231	0.233	0.295
1759	21/07/2005	0.383	0.311	0.227	0.223	0.272	0.233	0.234	0.298
2359	21/07/2005	0.367	0.306	0.226	0.222	0.272	0.233	0.234	0.297
559	22/07/2005	0.362	0.305	0.224	0.222	0.271	0.232	0.233	0.297
1159	22/07/2005	0.378	0.303	0.223	0.221	0.27	0.231	0.233	0.296
1759	22/07/2005	0.364	0.299	0.224	0.222	0.272	0.233	0.234	0.299
2359	22/07/2005	0.351	0.297	0.222	0.221	0.271	0.233	0.233	0.297
559	23/07/2005	0.347	0.297	0.221	0.22	0.27	0.232	0.233	0.296
1159	23/07/2005	0.401	0.299	0.22	0.219	0.27	0.232	0.232	0.296
1759	23/07/2005	0.524	0.388	0.227	0.219	0.269	0.232	0.232	0.296
2359	23/07/2005	0.491	0.424	0.254	0.231	0.273	0.232	0.232	0.295
559	24/07/2005	0.462	0.418	0.253	0.238	0.278	0.236	0.235	0.295
1159	24/07/2005	0.471	0.418	0.252	0.238	0.279	0.238	0.239	0.295
1759	24/07/2005	0.459	0.42	0.255	0.242	0.282	0.24	0.241	0.296
2359	24/07/2005	0.429	0.406	0.252	0.241	0.283	0.243	0.244	0.296
559	25/07/2005	0.414	0.395	0.248	0.239	0.281	0.242	0.243	0.296
1159	25/07/2005	0.423	0.393	0.247	0.238	0.281	0.242	0.244	0.302
1759	25/07/2005	0.425	0.389	0.247	0.238	0.281	0.242	0.244	0.306
2359	25/07/2005	0.42	0.396	0.249	0.239	0.281	0.241	0.243	0.309
559	26/07/2005	0.411	0.395	0.248	0.239	0.281	0.241	0.242	0.31
1159	26/07/2005	0.416	0.389	0.245	0.237	0.279	0.24	0.241	0.309
1759	26/07/2005	0.409	0.381	0.246	0.239	0.281	0.242	0.243	0.312
2359	26/07/2005	0.393	0.373	0.245	0.238	0.281	0.242	0.242	0.312
559	27/07/2005	0.387	0.37	0.242	0.236	0.279	0.24	0.241	0.308
1159	27/07/2005	0.403	0.37	0.24	0.235	0.278	0.239	0.24	0.309
1759	27/07/2005	0.399	0.36	0.242	0.236	0.28	0.241	0.242	0.311
2359	27/07/2005	0.378	0.353	0.241	0.236	0.28	0.241	0.242	0.31
559	28/07/2005	0.372	0.35	0.238	0.234	0.278	0.239	0.24	0.307
1159	28/07/2005	0.38	0.352	0.237	0.234	0.279	0.24	0.241	0.309
1759	28/07/2005	0.384	0.351	0.236	0.233	0.277	0.239	0.24	0.306
2359	28/07/2005	0.381	0.354	0.237	0.234	0.278	0.239	0.24	0.307
559	29/07/2005	0.379	0.354	0.236	0.233	0.277	0.238	0.239	0.305

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)						
		5	20	30	45	70	90	100
1159	29/07/2005	0.389	0.354	0.235	0.231	0.276	0.238	0.238
1759	29/07/2005	0.383	0.347	0.237	0.233	0.277	0.239	0.239
2359	29/07/2005	0.37	0.343	0.236	0.233	0.277	0.239	0.239
559	30/07/2005	0.368	0.344	0.235	0.232	0.276	0.238	0.238
1159	30/07/2005	0.376	0.343	0.233	0.23	0.274	0.237	0.237
1759	30/07/2005	0.381	0.337	0.234	0.231	0.276	0.238	0.238
2359	30/07/2005	0.359	0.332	0.234	0.232	0.276	0.238	0.238
559	31/07/2005	0.356	0.332	0.233	0.231	0.275	0.238	0.237
1159	31/07/2005	0.369	0.331	0.23	0.228	0.273	0.236	0.236
1759	31/07/2005	0.374	0.331	0.232	0.229	0.275	0.237	0.236
2359	31/07/2005	0.357	0.329	0.233	0.231	0.276	0.238	0.237
559	01/08/2005	0.352	0.329	0.231	0.229	0.275	0.237	0.236
1159	01/08/2005	0.362	0.327	0.229	0.227	0.273	0.235	0.235
1759	01/08/2005	0.36	0.324	0.231	0.23	0.276	0.238	0.237
2359	01/08/2005	0.355	0.324	0.23	0.228	0.274	0.236	0.235
559	02/08/2005	0.355	0.329	0.23	0.228	0.274	0.236	0.235
1159	02/08/2005	0.363	0.332	0.23	0.228	0.274	0.236	0.235
1759	02/08/2005	0.365	0.329	0.229	0.227	0.273	0.235	0.234
2359	02/08/2005	0.355	0.33	0.231	0.228	0.273	0.236	0.235
559	03/08/2005	0.356	0.331	0.229	0.227	0.273	0.235	0.234
1159	03/08/2005	0.361	0.33	0.229	0.226	0.272	0.235	0.233
1759	03/08/2005	0.362	0.325	0.229	0.226	0.272	0.235	0.233
2359	03/08/2005	0.345	0.322	0.23	0.227	0.274	0.236	0.234
559	04/08/2005	0.34	0.321	0.228	0.226	0.272	0.235	0.233
1159	04/08/2005	0.355	0.322	0.227	0.225	0.272	0.235	0.233
1759	04/08/2005	0.424	0.324	0.23	0.228	0.274	0.237	0.235
2359	04/08/2005	0.428	0.4	0.246	0.23	0.276	0.237	0.242
559	05/08/2005	0.409	0.389	0.245	0.232	0.277	0.237	0.24
1159	05/08/2005	0.405	0.384	0.244	0.233	0.276	0.236	0.239
1759	05/08/2005	0.391	0.371	0.243	0.234	0.277	0.237	0.239
2359	05/08/2005	0.376	0.367	0.243	0.236	0.279	0.239	0.24
559	06/08/2005	0.375	0.366	0.241	0.235	0.278	0.239	0.239
1159	06/08/2005	0.383	0.362	0.238	0.232	0.276	0.237	0.237
1759	06/08/2005	0.371	0.351	0.238	0.233	0.276	0.237	0.237
2359	06/08/2005	0.362	0.348	0.239	0.234	0.278	0.239	0.238
559	07/08/2005	0.36	0.347	0.237	0.233	0.278	0.239	0.238
1159	07/08/2005	0.367	0.346	0.236	0.232	0.277	0.238	0.237
1759	07/08/2005	0.37	0.345	0.235	0.233	0.277	0.239	0.238
2359	07/08/2005	0.361	0.341	0.234	0.231	0.276	0.238	0.236
559	08/08/2005	0.358	0.34	0.233	0.23	0.275	0.237	0.236
1159	08/08/2005	0.372	0.344	0.232	0.23	0.275	0.237	0.236
1759	08/08/2005	0.364	0.336	0.232	0.229	0.274	0.236	0.235
2359	08/08/2005	0.351	0.334	0.232	0.23	0.275	0.237	0.235
559	09/08/2005	0.35	0.334	0.231	0.23	0.275	0.237	0.235
1159	09/08/2005	0.356	0.333	0.23	0.228	0.274	0.236	0.235
1759	09/08/2005	0.354	0.329	0.23	0.229	0.274	0.237	0.235
2359	09/08/2005	0.343	0.326	0.23	0.229	0.275	0.237	0.235
559	10/08/2005	0.343	0.325	0.228	0.227	0.274	0.236	0.234
1159	10/08/2005	0.356	0.326	0.228	0.227	0.274	0.236	0.234
1759	10/08/2005	0.353	0.321	0.229	0.228	0.274	0.237	0.234
2359	10/08/2005	0.351	0.319	0.227	0.227	0.273	0.236	0.234
559	11/08/2005	0.357	0.324	0.227	0.227	0.273	0.236	0.234
1159	11/08/2005	0.347	0.329	0.227	0.226	0.273	0.236	0.234
1759	11/08/2005	0.349	0.332	0.228	0.227	0.273	0.236	0.234
2359	11/08/2005	0.344	0.331	0.228	0.226	0.272	0.236	0.233
559	12/08/2005	0.344	0.334	0.227	0.226	0.272	0.236	0.233
1159	12/08/2005	0.354	0.338	0.229	0.227	0.274	0.237	0.234
1759	12/08/2005	0.35	0.332	0.229	0.226	0.273	0.236	0.233
2359	12/08/2005	0.339	0.328	0.228	0.226	0.272	0.236	0.233
559	13/08/2005	0.34	0.328	0.227	0.225	0.272	0.236	0.233
1159	13/08/2005	0.356	0.334	0.228	0.226	0.272	0.236	0.233
1759	13/08/2005	0.351	0.332	0.228	0.226	0.273	0.236	0.233
2359	13/08/2005	0.344	0.33	0.228	0.225	0.272	0.236	0.233
559	14/08/2005	0.345	0.33	0.227	0.225	0.271	0.236	0.232
1159	14/08/2005	0.356	0.336	0.227	0.224	0.27	0.235	0.232
1759	14/08/2005	0.354	0.336	0.229	0.225	0.272	0.236	0.233
2359	14/08/2005	0.343	0.334	0.229	0.225	0.272	0.236	0.232
559	15/08/2005	0.343	0.333	0.227	0.224	0.27	0.235	0.231
1159	15/08/2005	0.353	0.335	0.227	0.224	0.271	0.235	0.232
1759	15/08/2005	0.359	0.335	0.228	0.226	0.272	0.237	0.233
2359	15/08/2005	0.351	0.334	0.228	0.225	0.271	0.236	0.232
559	16/08/2005	0.349	0.334	0.227	0.224	0.27	0.235	0.232

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	16/08/2005	0.356	0.334	0.227	0.224	0.27	0.235	0.231	0.287
1759	16/08/2005	0.353	0.332	0.228	0.225	0.271	0.235	0.232	0.287
2359	16/08/2005	0.346	0.33	0.228	0.225	0.271	0.236	0.232	0.288
559	17/08/2005	0.345	0.329	0.227	0.224	0.27	0.236	0.232	0.287
1159	17/08/2005	0.362	0.332	0.226	0.223	0.269	0.235	0.231	0.285
1759	17/08/2005	0.396	0.346	0.228	0.225	0.271	0.236	0.232	0.287
2359	17/08/2005	0.451	0.377	0.232	0.224	0.27	0.236	0.232	0.286
559	18/08/2005	0.447	0.406	0.246	0.228	0.271	0.236	0.232	0.286
1159	18/08/2005	0.447	0.406	0.248	0.232	0.272	0.236	0.232	0.286
1759	18/08/2005	0.428	0.4	0.248	0.236	0.274	0.237	0.233	0.286
2359	18/08/2005	0.414	0.392	0.247	0.237	0.275	0.237	0.234	0.285
559	19/08/2005	0.409	0.389	0.245	0.237	0.276	0.238	0.235	0.285
1159	19/08/2005	0.41	0.385	0.244	0.236	0.276	0.238	0.235	0.285
1759	19/08/2005	0.409	0.381	0.244	0.236	0.277	0.239	0.236	0.286
2359	19/08/2005	0.399	0.378	0.244	0.237	0.278	0.239	0.237	0.287
559	20/08/2005	0.395	0.376	0.242	0.236	0.277	0.239	0.237	0.286
1159	20/08/2005	0.406	0.375	0.241	0.234	0.276	0.238	0.236	0.285
1759	20/08/2005	0.399	0.371	0.242	0.235	0.277	0.24	0.238	0.287
2359	20/08/2005	0.387	0.366	0.242	0.236	0.278	0.24	0.238	0.287
559	21/08/2005	0.384	0.364	0.24	0.235	0.277	0.239	0.238	0.287
1159	21/08/2005	0.389	0.36	0.237	0.232	0.274	0.237	0.236	0.284
1759	21/08/2005	0.39	0.359	0.241	0.236	0.278	0.241	0.24	0.29
2359	21/08/2005	0.392	0.353	0.239	0.234	0.277	0.24	0.238	0.287
559	22/08/2005	0.421	0.389	0.245	0.236	0.278	0.24	0.239	0.287
1159	22/08/2005	0.413	0.387	0.246	0.237	0.278	0.241	0.242	0.287
1759	22/08/2005	0.399	0.38	0.246	0.238	0.28	0.242	0.244	0.289
2359	22/08/2005	0.385	0.371	0.245	0.238	0.279	0.242	0.244	0.29
559	23/08/2005	0.381	0.37	0.243	0.238	0.279	0.242	0.243	0.291
1159	23/08/2005	0.392	0.37	0.242	0.236	0.278	0.241	0.242	0.293
1759	23/08/2005	0.384	0.366	0.243	0.238	0.281	0.243	0.244	0.297
2359	23/08/2005	0.371	0.359	0.241	0.236	0.279	0.241	0.242	0.295
559	24/08/2005	0.369	0.36	0.24	0.236	0.279	0.241	0.242	0.296
1159	24/08/2005	0.374	0.358	0.238	0.234	0.277	0.24	0.24	0.295
1759	24/08/2005	0.381	0.353	0.239	0.235	0.278	0.241	0.241	0.297
2359	24/08/2005	0.362	0.347	0.237	0.234	0.278	0.241	0.241	0.296
559	25/08/2005	0.356	0.347	0.236	0.234	0.277	0.24	0.24	0.296
1159	25/08/2005	0.366	0.347	0.234	0.232	0.276	0.239	0.239	0.295
1759	25/08/2005	0.372	0.342	0.235	0.233	0.277	0.241	0.24	0.298
2359	25/08/2005	0.353	0.338	0.235	0.234	0.278	0.241	0.24	0.298
559	26/08/2005	0.348	0.338	0.233	0.232	0.277	0.24	0.239	0.296
1159	26/08/2005	0.358	0.337	0.231	0.23	0.274	0.239	0.238	0.295
1759	26/08/2005	0.365	0.331	0.233	0.231	0.276	0.24	0.239	0.297
2359	26/08/2005	0.345	0.327	0.233	0.232	0.277	0.24	0.239	0.297
559	27/08/2005	0.339	0.327	0.231	0.231	0.276	0.24	0.238	0.296
1159	27/08/2005	0.347	0.327	0.229	0.229	0.274	0.238	0.237	0.295
1759	27/08/2005	0.354	0.321	0.231	0.23	0.276	0.24	0.238	0.297
2359	27/08/2005	0.334	0.317	0.231	0.23	0.276	0.24	0.238	0.296
559	28/08/2005	0.331	0.318	0.229	0.229	0.275	0.239	0.237	0.295
1159	28/08/2005	0.337	0.317	0.227	0.227	0.273	0.237	0.236	0.293
1759	28/08/2005	0.342	0.314	0.228	0.229	0.275	0.239	0.237	0.295
2359	28/08/2005	0.33	0.312	0.228	0.229	0.275	0.24	0.237	0.296
559	29/08/2005	0.326	0.311	0.227	0.228	0.274	0.239	0.236	0.294
1159	29/08/2005	0.33	0.311	0.226	0.228	0.274	0.238	0.236	0.294
1759	29/08/2005	0.328	0.309	0.225	0.227	0.273	0.238	0.235	0.293
2359	29/08/2005	0.328	0.31	0.225	0.226	0.273	0.238	0.235	0.293
559	30/08/2005	0.367	0.321	0.225	0.226	0.273	0.238	0.235	0.292
1159	30/08/2005	0.372	0.335	0.227	0.227	0.273	0.238	0.235	0.292
1759	30/08/2005	0.372	0.339	0.23	0.229	0.275	0.239	0.236	0.293
2359	30/08/2005	0.36	0.339	0.231	0.23	0.276	0.239	0.236	0.293
559	31/08/2005	0.36	0.342	0.232	0.23	0.275	0.239	0.237	0.292
1159	31/08/2005	0.369	0.341	0.231	0.229	0.274	0.238	0.236	0.291
1759	31/08/2005	0.368	0.34	0.234	0.231	0.277	0.241	0.238	0.295
2359	31/08/2005	0.372	0.344	0.234	0.23	0.275	0.239	0.237	0.292
559	01/09/2005	0.37	0.351	0.235	0.231	0.275	0.239	0.237	0.291
1159	01/09/2005	0.381	0.353	0.235	0.231	0.274	0.238	0.236	0.291
1759	01/09/2005	0.376	0.349	0.238	0.233	0.277	0.241	0.238	0.294
2359	01/09/2005	0.362	0.345	0.237	0.232	0.276	0.24	0.237	0.292
559	02/09/2005	0.358	0.345	0.235	0.231	0.275	0.239	0.236	0.29
1159	02/09/2005	0.372	0.348	0.234	0.231	0.274	0.238	0.236	0.29
1759	02/09/2005	0.377	0.346	0.235	0.231	0.275	0.239	0.237	0.291
2359	02/09/2005	0.364	0.345	0.236	0.232	0.276	0.24	0.237	0.292
559	03/09/2005	0.364	0.346	0.235	0.232	0.275	0.239	0.237	0.291

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	03/09/2005	0.371	0.346	0.234	0.231	0.274	0.239	0.236	0.29
1759	03/09/2005	0.369	0.342	0.236	0.232	0.276	0.24	0.238	0.293
2359	03/09/2005	0.356	0.339	0.235	0.232	0.275	0.24	0.237	0.292
559	04/09/2005	0.352	0.338	0.233	0.231	0.274	0.239	0.237	0.291
1159	04/09/2005	0.361	0.339	0.232	0.23	0.274	0.239	0.236	0.29
1759	04/09/2005	0.363	0.334	0.232	0.23	0.275	0.239	0.237	0.291
2359	04/09/2005	0.349	0.331	0.233	0.231	0.275	0.24	0.237	0.292
559	05/09/2005	0.344	0.332	0.231	0.23	0.274	0.239	0.237	0.291
1159	05/09/2005	0.352	0.331	0.229	0.228	0.273	0.238	0.235	0.289
1759	05/09/2005	0.355	0.327	0.23	0.23	0.274	0.239	0.237	0.291
2359	05/09/2005	0.343	0.325	0.23	0.229	0.274	0.24	0.237	0.291
559	06/09/2005	0.339	0.326	0.229	0.229	0.274	0.239	0.236	0.29
1159	06/09/2005	0.347	0.327	0.228	0.228	0.273	0.238	0.235	0.29
1759	06/09/2005	0.353	0.325	0.23	0.23	0.276	0.241	0.238	0.294
2359	06/09/2005	0.336	0.319	0.228	0.229	0.274	0.239	0.236	0.291
559	07/09/2005	0.334	0.321	0.228	0.228	0.274	0.239	0.236	0.29
1159	07/09/2005	0.34	0.32	0.226	0.226	0.271	0.237	0.235	0.288
1759	07/09/2005	0.344	0.318	0.228	0.228	0.274	0.239	0.236	0.291
2359	07/09/2005	0.333	0.315	0.227	0.228	0.274	0.239	0.236	0.291
559	08/09/2005	0.332	0.315	0.226	0.227	0.273	0.239	0.235	0.29
1159	08/09/2005	0.337	0.314	0.225	0.226	0.272	0.238	0.235	0.288
1759	08/09/2005	0.342	0.315	0.227	0.228	0.275	0.24	0.237	0.292
2359	08/09/2005	0.328	0.311	0.225	0.226	0.273	0.238	0.235	0.289
559	09/09/2005	0.326	0.311	0.224	0.225	0.272	0.238	0.234	0.288
1159	09/09/2005	0.334	0.311	0.223	0.224	0.271	0.237	0.234	0.287
1759	09/09/2005	0.335	0.311	0.225	0.226	0.273	0.239	0.235	0.29
2359	09/09/2005	0.326	0.308	0.224	0.225	0.272	0.239	0.235	0.289
559	10/09/2005	0.326	0.308	0.223	0.225	0.271	0.238	0.234	0.288
1159	10/09/2005	0.33	0.308	0.222	0.224	0.271	0.237	0.234	0.287
1759	10/09/2005	0.335	0.308	0.223	0.225	0.273	0.239	0.235	0.29
2359	10/09/2005	0.326	0.305	0.222	0.224	0.271	0.238	0.234	0.288
559	11/09/2005	0.324	0.305	0.221	0.223	0.271	0.237	0.233	0.287
1159	11/09/2005	0.324	0.303	0.219	0.221	0.268	0.236	0.232	0.284
1759	11/09/2005	0.334	0.304	0.222	0.224	0.272	0.239	0.235	0.289
2359	11/09/2005	0.32	0.302	0.221	0.223	0.271	0.238	0.234	0.287
559	12/09/2005	0.321	0.303	0.221	0.223	0.27	0.237	0.233	0.286
1159	12/09/2005	0.327	0.302	0.219	0.222	0.269	0.236	0.233	0.285
1759	12/09/2005	0.327	0.303	0.221	0.223	0.271	0.238	0.234	0.287
2359	12/09/2005	0.324	0.302	0.22	0.222	0.27	0.237	0.233	0.286
559	13/09/2005	0.321	0.303	0.219	0.222	0.27	0.237	0.233	0.286
1159	13/09/2005	0.328	0.304	0.219	0.221	0.269	0.237	0.233	0.285
1759	13/09/2005	0.329	0.303	0.22	0.223	0.271	0.239	0.234	0.288
2359	13/09/2005	0.32	0.301	0.219	0.222	0.27	0.238	0.233	0.286
559	14/09/2005	0.318	0.301	0.219	0.221	0.27	0.237	0.233	0.285
1159	14/09/2005	0.321	0.3	0.217	0.219	0.267	0.236	0.232	0.282
1759	14/09/2005	0.327	0.301	0.219	0.221	0.27	0.238	0.234	0.286
2359	14/09/2005	0.318	0.301	0.219	0.222	0.27	0.238	0.234	0.286
559	15/09/2005	0.316	0.3	0.218	0.221	0.269	0.237	0.233	0.284
1159	15/09/2005	0.323	0.3	0.216	0.219	0.268	0.236	0.232	0.283
1759	15/09/2005	0.329	0.299	0.218	0.221	0.27	0.238	0.234	0.286
2359	15/09/2005	0.316	0.297	0.218	0.221	0.269	0.238	0.233	0.285
559	16/09/2005	0.317	0.297	0.217	0.22	0.268	0.237	0.233	0.283
1159	16/09/2005	0.324	0.297	0.216	0.219	0.268	0.237	0.233	0.283
1759	16/09/2005	0.327	0.296	0.217	0.22	0.269	0.238	0.234	0.284
2359	16/09/2005	0.32	0.295	0.217	0.22	0.269	0.238	0.233	0.284
559	17/09/2005	0.318	0.295	0.217	0.22	0.269	0.237	0.233	0.283
1159	17/09/2005	0.323	0.294	0.215	0.219	0.267	0.236	0.233	0.282
1759	17/09/2005	0.326	0.294	0.217	0.22	0.269	0.238	0.234	0.285
2359	17/09/2005	0.316	0.291	0.217	0.219	0.268	0.237	0.233	0.283
559	18/09/2005	0.315	0.292	0.216	0.219	0.268	0.237	0.233	0.283
1159	18/09/2005	0.32	0.291	0.215	0.218	0.267	0.236	0.233	0.282
1759	18/09/2005	0.319	0.291	0.217	0.22	0.269	0.238	0.234	0.284
2359	18/09/2005	0.311	0.289	0.216	0.219	0.268	0.237	0.233	0.282
559	19/09/2005	0.31	0.289	0.216	0.219	0.268	0.237	0.233	0.282
1159	19/09/2005	0.314	0.289	0.215	0.219	0.268	0.237	0.233	0.282
1759	19/09/2005	0.314	0.287	0.216	0.219	0.268	0.237	0.233	0.282
2359	19/09/2005	0.309	0.287	0.215	0.219	0.268	0.237	0.233	0.282
559	20/09/2005	0.309	0.287	0.215	0.218	0.268	0.237	0.233	0.282
1159	20/09/2005	0.312	0.286	0.214	0.217	0.267	0.236	0.232	0.28
1759	20/09/2005	0.313	0.285	0.215	0.218	0.268	0.237	0.233	0.281
2359	20/09/2005	0.312	0.286	0.214	0.218	0.268	0.237	0.233	0.281
559	21/09/2005	0.312	0.287	0.214	0.218	0.267	0.236	0.233	0.281

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	21/09/2005	0.316	0.287	0.213	0.217	0.266	0.236	0.232	0.28
1759	21/09/2005	0.323	0.289	0.215	0.218	0.268	0.238	0.233	0.282
2359	21/09/2005	0.314	0.287	0.214	0.217	0.267	0.237	0.233	0.281
559	22/09/2005	0.311	0.287	0.214	0.217	0.267	0.236	0.232	0.28
1159	22/09/2005	0.314	0.287	0.213	0.216	0.266	0.235	0.232	0.279
1759	22/09/2005	0.317	0.288	0.214	0.218	0.268	0.237	0.233	0.281
2359	22/09/2005	0.31	0.286	0.214	0.217	0.267	0.236	0.232	0.28
559	23/09/2005	0.308	0.287	0.214	0.217	0.267	0.236	0.232	0.279
1159	23/09/2005	0.313	0.287	0.213	0.216	0.266	0.235	0.232	0.278
1759	23/09/2005	0.314	0.286	0.214	0.217	0.267	0.236	0.232	0.279
2359	23/09/2005	0.311	0.286	0.213	0.217	0.267	0.236	0.232	0.279
559	24/09/2005	0.31	0.286	0.213	0.216	0.267	0.236	0.232	0.279
1159	24/09/2005	0.314	0.286	0.213	0.216	0.266	0.236	0.232	0.279
1759	24/09/2005	0.314	0.285	0.213	0.217	0.267	0.237	0.233	0.28
2359	24/09/2005	0.311	0.284	0.213	0.216	0.267	0.236	0.232	0.279
559	25/09/2005	0.311	0.284	0.213	0.216	0.267	0.236	0.232	0.279
1159	25/09/2005	0.312	0.283	0.212	0.215	0.265	0.235	0.231	0.277
1759	25/09/2005	0.315	0.284	0.213	0.217	0.267	0.237	0.233	0.28
2359	25/09/2005	0.307	0.283	0.214	0.217	0.267	0.237	0.233	0.28
559	26/09/2005	0.304	0.283	0.213	0.216	0.266	0.236	0.232	0.278
1159	26/09/2005	0.309	0.284	0.212	0.216	0.266	0.236	0.232	0.278
1759	26/09/2005	0.311	0.282	0.213	0.216	0.267	0.237	0.233	0.279
2359	26/09/2005	0.305	0.281	0.212	0.216	0.266	0.236	0.232	0.278
559	27/09/2005	0.302	0.282	0.212	0.216	0.266	0.236	0.232	0.278
1159	27/09/2005	0.305	0.282	0.211	0.215	0.265	0.235	0.232	0.277
1759	27/09/2005	0.309	0.281	0.212	0.216	0.267	0.237	0.233	0.279
2359	27/09/2005	0.302	0.28	0.212	0.216	0.267	0.236	0.233	0.279
559	28/09/2005	0.298	0.28	0.211	0.215	0.266	0.236	0.232	0.277
1159	28/09/2005	0.303	0.28	0.21	0.214	0.264	0.234	0.231	0.276
1759	28/09/2005	0.31	0.279	0.211	0.215	0.265	0.236	0.232	0.278
2359	28/09/2005	0.307	0.279	0.211	0.215	0.266	0.236	0.233	0.278
559	29/09/2005	0.305	0.279	0.211	0.215	0.266	0.236	0.233	0.278
1159	29/09/2005	0.308	0.278	0.211	0.214	0.265	0.236	0.232	0.277
1759	29/09/2005	0.309	0.278	0.212	0.216	0.267	0.237	0.233	0.279
2359	29/09/2005	0.29	0.276	0.211	0.215	0.265	0.236	0.232	0.277
559	30/09/2005	0.29	0.277	0.21	0.214	0.265	0.236	0.232	0.277
1159	30/09/2005	0.291	0.276	0.21	0.214	0.264	0.235	0.232	0.276
1759	30/09/2005	0.295	0.277	0.211	0.215	0.266	0.237	0.233	0.279
2359	30/09/2005	0.287	0.276	0.21	0.215	0.265	0.236	0.232	0.277
559	01/10/2005	0.285	0.276	0.21	0.214	0.265	0.235	0.232	0.276
1159	01/10/2005	0.286	0.275	0.209	0.213	0.264	0.235	0.232	0.275
1759	01/10/2005	0.292	0.275	0.21	0.214	0.265	0.236	0.233	0.277
2359	01/10/2005	0.288	0.275	0.209	0.214	0.264	0.236	0.232	0.277
559	02/10/2005	0.287	0.274	0.209	0.213	0.265	0.236	0.232	0.276
1159	02/10/2005	0.288	0.274	0.208	0.213	0.264	0.235	0.232	0.275
1759	02/10/2005	0.291	0.274	0.209	0.214	0.265	0.236	0.233	0.277
2359	02/10/2005	0.286	0.275	0.21	0.214	0.265	0.236	0.233	0.278
559	03/10/2005	0.285	0.274	0.209	0.213	0.264	0.236	0.233	0.276
1159	03/10/2005	0.281	0.274	0.208	0.212	0.263	0.235	0.232	0.275
1759	03/10/2005	0.287	0.274	0.209	0.214	0.266	0.237	0.234	0.278
2359	03/10/2005	0.284	0.273	0.209	0.213	0.264	0.236	0.233	0.276
559	04/10/2005	0.284	0.274	0.208	0.213	0.264	0.236	0.233	0.277
1159	04/10/2005	0.283	0.273	0.207	0.212	0.263	0.235	0.232	0.275
1759	04/10/2005	0.291	0.274	0.209	0.214	0.265	0.237	0.234	0.278
2359	04/10/2005	0.286	0.273	0.209	0.213	0.264	0.236	0.233	0.277
559	05/10/2005	0.285	0.273	0.208	0.212	0.264	0.236	0.233	0.276
1159	05/10/2005	0.287	0.273	0.208	0.212	0.263	0.235	0.233	0.275
1759	05/10/2005	0.293	0.274	0.209	0.213	0.265	0.237	0.234	0.278
2359	05/10/2005	0.287	0.273	0.209	0.213	0.264	0.236	0.233	0.276
559	06/10/2005	0.285	0.273	0.209	0.213	0.264	0.236	0.233	0.276
1159	06/10/2005	0.288	0.272	0.208	0.212	0.263	0.235	0.233	0.275
1759	06/10/2005	0.293	0.273	0.21	0.214	0.265	0.237	0.235	0.278
2359	06/10/2005	0.288	0.272	0.209	0.213	0.264	0.236	0.233	0.276
559	07/10/2005	0.287	0.272	0.209	0.213	0.264	0.236	0.234	0.277
1159	07/10/2005	0.287	0.271	0.207	0.211	0.262	0.234	0.232	0.274
1759	07/10/2005	0.292	0.271	0.209	0.213	0.264	0.236	0.234	0.277
2359	07/10/2005	0.288	0.271	0.209	0.212	0.264	0.235	0.233	0.276
559	08/10/2005	0.288	0.271	0.209	0.212	0.263	0.235	0.233	0.276
1159	08/10/2005	0.289	0.27	0.208	0.211	0.263	0.235	0.233	0.275
1759	08/10/2005	0.293	0.272	0.21	0.214	0.266	0.237	0.235	0.279
2359	08/10/2005	0.284	0.27	0.209	0.212	0.264	0.236	0.234	0.276
559	09/10/2005	0.283	0.271	0.208	0.212	0.263	0.235	0.233	0.275

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	09/10/2005	0.285	0.27	0.207	0.211	0.262	0.234	0.233	0.274
1759	09/10/2005	0.292	0.272	0.21	0.214	0.265	0.237	0.235	0.279
2359	09/10/2005	0.286	0.269	0.208	0.212	0.263	0.235	0.233	0.275
559	10/10/2005	0.285	0.269	0.208	0.211	0.262	0.234	0.233	0.275
1159	10/10/2005	0.288	0.27	0.208	0.211	0.263	0.235	0.233	0.276
1759	10/10/2005	0.29	0.27	0.209	0.212	0.263	0.235	0.234	0.276
2359	10/10/2005	0.288	0.269	0.209	0.212	0.264	0.236	0.234	0.276
559	11/10/2005	0.285	0.269	0.209	0.212	0.263	0.235	0.234	0.276
1159	11/10/2005	0.285	0.269	0.208	0.211	0.262	0.234	0.233	0.275
1759	11/10/2005	0.29	0.269	0.209	0.212	0.264	0.236	0.234	0.277
2359	11/10/2005	0.283	0.268	0.209	0.211	0.263	0.235	0.233	0.275
559	12/10/2005	0.281	0.269	0.208	0.211	0.263	0.235	0.233	0.275
1159	12/10/2005	0.284	0.268	0.207	0.21	0.262	0.234	0.233	0.275
1759	12/10/2005	0.289	0.269	0.209	0.212	0.264	0.236	0.234	0.277
2359	12/10/2005	0.285	0.268	0.208	0.211	0.262	0.235	0.233	0.275
559	13/10/2005	0.285	0.268	0.208	0.211	0.263	0.235	0.233	0.276
1159	13/10/2005	0.284	0.267	0.207	0.21	0.261	0.233	0.232	0.274
1759	13/10/2005	0.29	0.269	0.209	0.213	0.264	0.237	0.234	0.278
2359	13/10/2005	0.283	0.267	0.208	0.211	0.263	0.235	0.233	0.276
559	14/10/2005	0.279	0.267	0.208	0.211	0.262	0.235	0.233	0.275
1159	14/10/2005	0.281	0.267	0.207	0.21	0.261	0.234	0.232	0.274
1759	14/10/2005	0.288	0.268	0.209	0.213	0.265	0.237	0.235	0.279
2359	14/10/2005	0.28	0.266	0.208	0.211	0.263	0.235	0.233	0.275
559	15/10/2005	0.281	0.266	0.207	0.21	0.262	0.234	0.233	0.275
1159	15/10/2005	0.282	0.266	0.206	0.21	0.262	0.234	0.232	0.275
1759	15/10/2005	0.285	0.266	0.207	0.211	0.263	0.235	0.233	0.276
2359	15/10/2005	0.283	0.266	0.207	0.21	0.263	0.235	0.233	0.276
559	16/10/2005	0.281	0.265	0.207	0.21	0.262	0.234	0.233	0.275
1159	16/10/2005	0.281	0.265	0.206	0.21	0.262	0.234	0.232	0.275
1759	16/10/2005	0.284	0.266	0.208	0.211	0.263	0.236	0.234	0.277
2359	16/10/2005	0.278	0.265	0.207	0.21	0.262	0.235	0.233	0.275
559	17/10/2005	0.278	0.265	0.206	0.21	0.262	0.234	0.233	0.275
1159	17/10/2005	0.278	0.264	0.205	0.209	0.261	0.234	0.232	0.274
1759	17/10/2005	0.282	0.265	0.207	0.21	0.263	0.235	0.233	0.276
2359	17/10/2005	0.278	0.264	0.206	0.21	0.261	0.234	0.233	0.275
559	18/10/2005	0.278	0.264	0.206	0.21	0.262	0.234	0.233	0.275
1159	18/10/2005	0.276	0.264	0.205	0.209	0.261	0.234	0.232	0.274
1759	18/10/2005	0.279	0.264	0.207	0.211	0.263	0.236	0.234	0.277
2359	18/10/2005	0.279	0.263	0.206	0.21	0.262	0.235	0.233	0.275
559	19/10/2005	0.277	0.263	0.205	0.209	0.261	0.234	0.232	0.275
1159	19/10/2005	0.278	0.262	0.204	0.208	0.26	0.233	0.231	0.273
1759	19/10/2005	0.283	0.264	0.206	0.21	0.262	0.235	0.233	0.276
2359	19/10/2005	0.281	0.263	0.206	0.209	0.261	0.234	0.233	0.275
559	20/10/2005	0.278	0.263	0.206	0.21	0.262	0.235	0.233	0.276
1159	20/10/2005	0.279	0.263	0.204	0.208	0.26	0.233	0.232	0.274
1759	20/10/2005	0.282	0.263	0.206	0.209	0.262	0.235	0.233	0.276
2359	20/10/2005	0.278	0.262	0.205	0.209	0.261	0.234	0.233	0.275
559	21/10/2005	0.276	0.263	0.205	0.209	0.261	0.234	0.233	0.275
1159	21/10/2005	0.271	0.262	0.204	0.208	0.26	0.234	0.232	0.274
1759	21/10/2005	0.274	0.264	0.207	0.211	0.264	0.237	0.235	0.279
2359	21/10/2005	0.274	0.263	0.205	0.209	0.262	0.235	0.233	0.276
559	22/10/2005	0.271	0.262	0.204	0.209	0.261	0.234	0.233	0.275
1159	22/10/2005	0.262	0.261	0.203	0.207	0.259	0.233	0.232	0.272
1759	22/10/2005	0.268	0.262	0.205	0.21	0.262	0.236	0.234	0.277
2359	22/10/2005	0.271	0.261	0.205	0.209	0.261	0.235	0.233	0.275
559	23/10/2005	0.272	0.262	0.204	0.209	0.261	0.234	0.233	0.275
1159	23/10/2005	0.272	0.261	0.204	0.208	0.26	0.233	0.232	0.274
1759	23/10/2005	0.277	0.262	0.205	0.209	0.262	0.235	0.234	0.276
2359	23/10/2005	0.275	0.262	0.205	0.209	0.261	0.234	0.234	0.275
559	24/10/2005	0.274	0.262	0.205	0.209	0.261	0.235	0.234	0.275
1159	24/10/2005	0.274	0.262	0.204	0.208	0.26	0.234	0.233	0.274
1759	24/10/2005	0.279	0.264	0.206	0.21	0.263	0.237	0.235	0.279
2359	24/10/2005	0.274	0.263	0.205	0.209	0.261	0.235	0.234	0.275
559	25/10/2005	0.273	0.262	0.205	0.209	0.261	0.235	0.234	0.275
1159	25/10/2005	0.272	0.262	0.203	0.207	0.259	0.233	0.232	0.273
1759	25/10/2005	0.279	0.263	0.206	0.21	0.263	0.236	0.235	0.278
2359	25/10/2005	0.275	0.262	0.206	0.209	0.261	0.235	0.234	0.276
559	26/10/2005	0.273	0.262	0.205	0.208	0.261	0.234	0.233	0.275
1159	26/10/2005	0.273	0.262	0.205	0.208	0.26	0.234	0.233	0.275
1759	26/10/2005	0.277	0.262	0.206	0.209	0.261	0.235	0.234	0.276
2359	26/10/2005	0.273	0.262	0.205	0.209	0.261	0.235	0.234	0.276
559	27/10/2005	0.271	0.262	0.205	0.209	0.261	0.234	0.234	0.276



MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	27/10/2005	0.269	0.261	0.204	0.208	0.259	0.233	0.233	0.274
1759	27/10/2005	0.274	0.263	0.207	0.21	0.263	0.236	0.235	0.279
2359	27/10/2005	0.269	0.262	0.205	0.209	0.261	0.235	0.233	0.276
559	28/10/2005	0.269	0.262	0.204	0.208	0.26	0.234	0.233	0.275
1159	28/10/2005	0.268	0.261	0.204	0.207	0.26	0.233	0.233	0.275
1759	28/10/2005	0.269	0.262	0.206	0.21	0.263	0.236	0.235	0.279
2359	28/10/2005	0.268	0.261	0.205	0.209	0.261	0.235	0.234	0.276
559	29/10/2005	0.266	0.26	0.203	0.207	0.259	0.233	0.232	0.274
1159	29/10/2005	0.266	0.26	0.203	0.207	0.259	0.233	0.233	0.274
1759	29/10/2005	0.27	0.262	0.205	0.209	0.262	0.236	0.235	0.278
2359	29/10/2005	0.267	0.26	0.204	0.208	0.26	0.234	0.233	0.275
559	30/10/2005	0.267	0.261	0.204	0.207	0.26	0.234	0.233	0.275
1159	30/10/2005	0.267	0.26	0.203	0.207	0.26	0.233	0.233	0.275
1759	30/10/2005	0.271	0.261	0.205	0.209	0.261	0.235	0.234	0.277
2359	30/10/2005	0.267	0.26	0.204	0.208	0.261	0.234	0.233	0.276
559	31/10/2005	0.267	0.261	0.204	0.208	0.26	0.234	0.234	0.276
1159	31/10/2005	0.263	0.26	0.203	0.207	0.259	0.233	0.233	0.274
1759	31/10/2005	0.263	0.261	0.204	0.209	0.261	0.235	0.234	0.277
2359	31/10/2005	0.265	0.259	0.203	0.207	0.259	0.233	0.232	0.274
559	01/11/2005	0.266	0.26	0.203	0.207	0.259	0.234	0.233	0.275
1159	01/11/2005	0.266	0.259	0.203	0.207	0.259	0.233	0.233	0.274
1759	01/11/2005	0.266	0.259	0.203	0.207	0.259	0.234	0.233	0.275
2359	01/11/2005	0.266	0.259	0.203	0.207	0.259	0.233	0.233	0.274
559	02/11/2005	0.267	0.259	0.203	0.207	0.259	0.234	0.233	0.275
1159	02/11/2005	0.267	0.259	0.202	0.206	0.258	0.233	0.233	0.274
1759	02/11/2005	0.27	0.259	0.203	0.207	0.259	0.234	0.233	0.275
2359	02/11/2005	0.269	0.259	0.203	0.207	0.259	0.234	0.234	0.276
559	03/11/2005	0.268	0.259	0.203	0.207	0.259	0.234	0.233	0.275
1159	03/11/2005	0.268	0.26	0.203	0.207	0.259	0.234	0.233	0.275
1759	03/11/2005	0.269	0.259	0.203	0.207	0.259	0.234	0.233	0.275
2359	03/11/2005	0.269	0.26	0.203	0.207	0.259	0.234	0.233	0.275
559	04/11/2005	0.269	0.26	0.203	0.207	0.259	0.234	0.233	0.275
1159	04/11/2005	0.269	0.259	0.202	0.207	0.258	0.233	0.233	0.275
1759	04/11/2005	0.269	0.259	0.203	0.207	0.259	0.234	0.233	0.275
2359	04/11/2005	0.269	0.26	0.203	0.207	0.259	0.234	0.233	0.275
559	05/11/2005	0.268	0.259	0.202	0.207	0.258	0.233	0.233	0.275
1159	05/11/2005	0.268	0.259	0.202	0.206	0.259	0.233	0.233	0.275
1759	05/11/2005	0.268	0.259	0.203	0.207	0.259	0.234	0.233	0.275
2359	05/11/2005	0.268	0.259	0.203	0.207	0.259	0.233	0.233	0.275
559	06/11/2005	0.268	0.259	0.203	0.207	0.259	0.233	0.233	0.275
1159	06/11/2005	0.267	0.259	0.202	0.206	0.258	0.233	0.233	0.275
1759	06/11/2005	0.268	0.259	0.203	0.207	0.259	0.234	0.234	0.276
2359	06/11/2005	0.267	0.259	0.202	0.206	0.258	0.233	0.233	0.275
559	07/11/2005	0.266	0.258	0.202	0.206	0.258	0.233	0.233	0.274
1159	07/11/2005	0.265	0.258	0.201	0.206	0.258	0.232	0.233	0.274
1759	07/11/2005	0.266	0.259	0.202	0.206	0.258	0.233	0.234	0.275
2359	07/11/2005	0.266	0.259	0.203	0.207	0.259	0.234	0.234	0.276
559	08/11/2005	0.265	0.258	0.202	0.206	0.258	0.233	0.233	0.275
1159	08/11/2005	0.262	0.258	0.201	0.206	0.258	0.233	0.233	0.275
1759	08/11/2005	0.263	0.258	0.203	0.207	0.259	0.235	0.234	0.277
2359	08/11/2005	0.255	0.258	0.202	0.207	0.259	0.234	0.234	0.276
559	09/11/2005	0.222	0.256	0.201	0.206	0.258	0.233	0.233	0.275
1159	09/11/2005	0.212	0.256	0.201	0.205	0.258	0.233	0.233	0.275
1759	09/11/2005	0.215	0.255	0.201	0.206	0.258	0.233	0.233	0.275
2359	09/11/2005	0.216	0.254	0.201	0.206	0.258	0.233	0.233	0.275
559	10/11/2005	0.212	0.254	0.2	0.205	0.257	0.233	0.233	0.275
1159	10/11/2005	0.212	0.253	0.2	0.205	0.257	0.233	0.233	0.275
1759	10/11/2005	0.218	0.253	0.202	0.207	0.259	0.234	0.234	0.277
2359	10/11/2005	0.225	0.252	0.201	0.206	0.258	0.234	0.234	0.276
559	11/11/2005	0.231	0.252	0.2	0.206	0.258	0.233	0.233	0.275
1159	11/11/2005	0.236	0.252	0.2	0.205	0.257	0.233	0.233	0.275
1759	11/11/2005	0.239	0.254	0.202	0.207	0.259	0.235	0.235	0.278
2359	11/11/2005	0.239	0.254	0.201	0.206	0.258	0.234	0.234	0.276
559	12/11/2005	0.209	0.254	0.201	0.206	0.258	0.234	0.234	0.276
1159	12/11/2005	0.193	0.252	0.2	0.205	0.257	0.233	0.233	0.275
1759	12/11/2005	0.193	0.251	0.201	0.207	0.259	0.234	0.235	0.278
2359	12/11/2005	0.184	0.248	0.2	0.206	0.257	0.233	0.234	0.276
559	13/11/2005	0.18	0.244	0.2	0.205	0.258	0.233	0.234	0.276
1159	13/11/2005	0.182	0.233	0.199	0.205	0.257	0.233	0.233	0.275
1759	13/11/2005	0.185	0.225	0.199	0.205	0.258	0.233	0.234	0.276
2359	13/11/2005	0.187	0.221	0.199	0.205	0.257	0.233	0.233	0.275
559	14/11/2005	0.188	0.22	0.199	0.205	0.258	0.234	0.234	0.276

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	14/11/2005	0.189	0.219	0.199	0.205	0.257	0.233	0.234	0.276
1759	14/11/2005	0.189	0.219	0.2	0.207	0.259	0.235	0.235	0.279
2359	14/11/2005	0.187	0.217	0.198	0.205	0.258	0.234	0.234	0.276
559	15/11/2005	0.185	0.212	0.198	0.205	0.257	0.233	0.234	0.276
1159	15/11/2005	0.183	0.203	0.197	0.205	0.256	0.233	0.233	0.275
1759	15/11/2005	0.184	0.196	0.198	0.206	0.258	0.234	0.234	0.277
2359	15/11/2005	0.183	0.19	0.197	0.205	0.257	0.233	0.234	0.276
559	16/11/2005	0.182	0.184	0.196	0.204	0.257	0.233	0.234	0.276
1159	16/11/2005	0.183	0.182	0.196	0.204	0.256	0.232	0.233	0.275
1759	16/11/2005	0.185	0.182	0.196	0.204	0.257	0.233	0.234	0.276
2359	16/11/2005	0.186	0.183	0.195	0.204	0.256	0.233	0.234	0.275
559	17/11/2005	0.187	0.183	0.195	0.204	0.257	0.233	0.234	0.276
1159	17/11/2005	0.187	0.183	0.194	0.203	0.256	0.232	0.233	0.275
1759	17/11/2005	0.189	0.184	0.194	0.204	0.256	0.233	0.233	0.275
2359	17/11/2005	0.19	0.185	0.194	0.204	0.257	0.233	0.234	0.276
559	18/11/2005	0.193	0.186	0.194	0.203	0.256	0.233	0.233	0.275
1159	18/11/2005	0.198	0.187	0.194	0.204	0.257	0.233	0.234	0.276
1759	18/11/2005	0.201	0.189	0.195	0.205	0.258	0.234	0.234	0.277
2359	18/11/2005	0.203	0.191	0.194	0.204	0.257	0.233	0.234	0.276
559	19/11/2005	0.2	0.193	0.194	0.204	0.256	0.233	0.234	0.276
1159	19/11/2005	0.199	0.195	0.194	0.203	0.256	0.232	0.233	0.276
1759	19/11/2005	0.203	0.196	0.195	0.205	0.258	0.234	0.235	0.278
2359	19/11/2005	0.206	0.198	0.195	0.204	0.257	0.233	0.234	0.277
559	20/11/2005	0.21	0.2	0.195	0.204	0.257	0.233	0.234	0.276
1159	20/11/2005	0.215	0.202	0.194	0.203	0.256	0.232	0.233	0.276
1759	20/11/2005	0.22	0.205	0.195	0.204	0.258	0.234	0.234	0.278
2359	20/11/2005	0.222	0.207	0.195	0.204	0.257	0.233	0.234	0.276
559	21/11/2005	0.222	0.21	0.195	0.203	0.256	0.232	0.233	0.276
1159	21/11/2005	0.219	0.213	0.195	0.203	0.256	0.232	0.234	0.276
1759	21/11/2005	0.217	0.216	0.195	0.203	0.256	0.233	0.234	0.276
2359	21/11/2005	0.215	0.218	0.195	0.203	0.256	0.233	0.233	0.276
559	22/11/2005	0.215	0.221	0.195	0.204	0.257	0.233	0.234	0.277
1159	22/11/2005	0.216	0.223	0.195	0.203	0.256	0.232	0.233	0.276
1759	22/11/2005	0.217	0.225	0.195	0.203	0.256	0.233	0.234	0.276
2359	22/11/2005	0.219	0.227	0.196	0.204	0.257	0.233	0.234	0.276
559	23/11/2005	0.22	0.228	0.196	0.204	0.257	0.233	0.234	0.277
1159	23/11/2005	0.221	0.23	0.195	0.203	0.256	0.233	0.233	0.276
1759	23/11/2005	0.22	0.231	0.195	0.203	0.256	0.233	0.234	0.276
2359	23/11/2005	0.211	0.232	0.195	0.203	0.256	0.233	0.233	0.276
559	24/11/2005	0.203	0.233	0.195	0.203	0.256	0.232	0.233	0.276
1159	24/11/2005	0.201	0.232	0.195	0.203	0.256	0.232	0.233	0.276
1759	24/11/2005	0.201	0.232	0.196	0.204	0.257	0.233	0.234	0.277
2359	24/11/2005	0.197	0.229	0.196	0.204	0.256	0.233	0.234	0.277
559	25/11/2005	0.192	0.224	0.196	0.203	0.256	0.232	0.233	0.276
1159	25/11/2005	0.192	0.214	0.195	0.203	0.256	0.232	0.233	0.276
1759	25/11/2005	0.192	0.206	0.196	0.204	0.257	0.233	0.234	0.277
2359	25/11/2005	0.188	0.198	0.196	0.204	0.256	0.233	0.234	0.277
559	26/11/2005	0.184	0.187	0.195	0.204	0.256	0.233	0.234	0.277
1159	26/11/2005	0.181	0.178	0.195	0.204	0.256	0.233	0.234	0.277
1759	26/11/2005	0.182	0.176	0.194	0.204	0.256	0.233	0.234	0.277
2359	26/11/2005	0.18	0.173	0.194	0.204	0.257	0.233	0.234	0.277
559	27/11/2005	0.177	0.17	0.192	0.203	0.256	0.233	0.234	0.277
1159	27/11/2005	0.176	0.167	0.189	0.202	0.255	0.232	0.233	0.275
1759	27/11/2005	0.18	0.168	0.185	0.204	0.257	0.233	0.234	0.278
2359	27/11/2005	0.18	0.168	0.179	0.203	0.256	0.233	0.234	0.277
559	28/11/2005	0.18	0.168	0.173	0.203	0.256	0.233	0.234	0.277
1159	28/11/2005	0.179	0.167	0.166	0.203	0.256	0.233	0.234	0.277
1759	28/11/2005	0.178	0.167	0.16	0.203	0.256	0.233	0.234	0.277
2359	28/11/2005	0.177	0.166	0.154	0.202	0.256	0.233	0.234	0.277
559	29/11/2005	0.177	0.165	0.148	0.202	0.256	0.233	0.234	0.277
1159	29/11/2005	0.177	0.165	0.144	0.201	0.256	0.232	0.233	0.277
1759	29/11/2005	0.179	0.165	0.141	0.201	0.256	0.233	0.234	0.277
2359	29/11/2005	0.179	0.165	0.14	0.201	0.256	0.233	0.234	0.277
559	30/11/2005	0.179	0.165	0.139	0.2	0.256	0.233	0.234	0.278
1159	30/11/2005	0.178	0.164	0.137	0.199	0.255	0.232	0.233	0.276
1759	30/11/2005	0.179	0.165	0.136	0.198	0.256	0.233	0.234	0.277
2359	30/11/2005	0.179	0.165	0.135	0.197	0.256	0.232	0.234	0.277
559	01/12/2005	0.179	0.164	0.134	0.195	0.255	0.232	0.233	0.277
1159	01/12/2005	0.179	0.164	0.133	0.193	0.255	0.232	0.233	0.277
1759	01/12/2005	0.179	0.164	0.133	0.192	0.255	0.232	0.234	0.277
2359	01/12/2005	0.18	0.164	0.132	0.189	0.255	0.232	0.233	0.277
559	02/12/2005	0.18	0.165	0.132	0.187	0.255	0.232	0.233	0.277

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	02/12/2005	0.18	0.164	0.132	0.183	0.255	0.232	0.233	0.277
1759	02/12/2005	0.181	0.165	0.132	0.18	0.255	0.232	0.233	0.277
2359	02/12/2005	0.18	0.165	0.131	0.176	0.255	0.232	0.233	0.277
559	03/12/2005	0.18	0.164	0.131	0.173	0.255	0.233	0.233	0.277
1159	03/12/2005	0.18	0.164	0.13	0.17	0.255	0.232	0.233	0.277
1759	03/12/2005	0.181	0.165	0.13	0.167	0.255	0.233	0.234	0.277
2359	03/12/2005	0.181	0.165	0.13	0.164	0.255	0.232	0.234	0.277
559	04/12/2005	0.181	0.165	0.13	0.161	0.255	0.232	0.234	0.277
1159	04/12/2005	0.181	0.165	0.13	0.159	0.255	0.232	0.233	0.277
1759	04/12/2005	0.181	0.165	0.13	0.158	0.255	0.232	0.233	0.277
2359	04/12/2005	0.181	0.165	0.13	0.156	0.255	0.233	0.234	0.278
559	05/12/2005	0.18	0.164	0.13	0.154	0.255	0.232	0.233	0.277
1159	05/12/2005	0.179	0.163	0.128	0.152	0.254	0.232	0.233	0.277
1759	05/12/2005	0.178	0.163	0.127	0.151	0.254	0.232	0.234	0.277
2359	05/12/2005	0.178	0.163	0.126	0.149	0.255	0.233	0.234	0.278
559	06/12/2005	0.177	0.162	0.125	0.146	0.253	0.232	0.233	0.277
1159	06/12/2005	0.176	0.161	0.123	0.144	0.254	0.232	0.233	0.277
1759	06/12/2005	0.177	0.161	0.122	0.142	0.254	0.232	0.233	0.277
2359	06/12/2005	0.176	0.16	0.121	0.14	0.254	0.232	0.233	0.278
559	07/12/2005	0.176	0.16	0.12	0.138	0.252	0.231	0.233	0.276
1159	07/12/2005	0.176	0.159	0.119	0.136	0.252	0.231	0.232	0.276
1759	07/12/2005	0.178	0.16	0.119	0.134	0.253	0.231	0.233	0.277
2359	07/12/2005	0.179	0.161	0.119	0.133	0.252	0.231	0.233	0.277
559	08/12/2005	0.18	0.161	0.12	0.133	0.253	0.232	0.234	0.279
1159	08/12/2005	0.18	0.162	0.12	0.132	0.252	0.231	0.233	0.277
1759	08/12/2005	0.181	0.162	0.12	0.132	0.251	0.231	0.233	0.277
2359	08/12/2005	0.182	0.162	0.12	0.132	0.251	0.231	0.233	0.277
559	09/12/2005	0.183	0.163	0.12	0.132	0.251	0.231	0.233	0.277
1159	09/12/2005	0.19	0.165	0.125	0.132	0.251	0.231	0.233	0.277
1759	09/12/2005	0.196	0.167	0.126	0.133	0.25	0.231	0.233	0.277
2359	09/12/2005	0.199	0.17	0.128	0.134	0.251	0.232	0.233	0.278
559	10/12/2005	0.202	0.171	0.129	0.134	0.25	0.231	0.233	0.277
1159	10/12/2005	0.202	0.172	0.13	0.134	0.249	0.23	0.232	0.276
1759	10/12/2005	0.205	0.173	0.131	0.135	0.249	0.231	0.233	0.277
2359	10/12/2005	0.206	0.174	0.132	0.136	0.25	0.231	0.233	0.278
559	11/12/2005	0.205	0.175	0.132	0.136	0.248	0.23	0.232	0.277
1159	11/12/2005	0.203	0.175	0.133	0.137	0.248	0.23	0.233	0.277
1759	11/12/2005	0.201	0.175	0.134	0.138	0.249	0.231	0.234	0.279
2359	11/12/2005	0.193	0.174	0.134	0.138	0.248	0.231	0.233	0.278
559	12/12/2005	0.191	0.172	0.134	0.138	0.247	0.23	0.232	0.277
1159	12/12/2005	0.189	0.171	0.133	0.138	0.248	0.23	0.233	0.278
1759	12/12/2005	0.189	0.171	0.133	0.139	0.248	0.231	0.233	0.278
2359	12/12/2005	0.189	0.17	0.132	0.138	0.247	0.23	0.233	0.277
559	13/12/2005	0.191	0.17	0.132	0.139	0.248	0.23	0.233	0.278
1159	13/12/2005	0.191	0.17	0.132	0.138	0.247	0.23	0.233	0.277
1759	13/12/2005	0.191	0.17	0.132	0.138	0.247	0.23	0.233	0.278
2359	13/12/2005	0.191	0.17	0.132	0.138	0.247	0.23	0.233	0.277
559	14/12/2005	0.19	0.17	0.131	0.138	0.246	0.229	0.232	0.277
1159	14/12/2005	0.191	0.17	0.131	0.138	0.247	0.23	0.233	0.278
1759	14/12/2005	0.191	0.17	0.131	0.138	0.247	0.23	0.233	0.278
2359	14/12/2005	0.19	0.17	0.131	0.138	0.247	0.23	0.233	0.278
559	15/12/2005	0.188	0.169	0.13	0.137	0.246	0.229	0.232	0.277
1159	15/12/2005	0.188	0.168	0.13	0.137	0.246	0.229	0.232	0.277
1759	15/12/2005	0.188	0.168	0.129	0.137	0.246	0.229	0.233	0.278
2359	15/12/2005	0.187	0.167	0.129	0.136	0.245	0.229	0.233	0.278
559	16/12/2005	0.186	0.167	0.128	0.136	0.245	0.229	0.233	0.278
1159	16/12/2005	0.185	0.166	0.127	0.135	0.245	0.228	0.232	0.277
1759	16/12/2005	0.184	0.165	0.127	0.135	0.245	0.229	0.233	0.278
2359	16/12/2005	0.184	0.165	0.125	0.134	0.244	0.228	0.233	0.278
559	17/12/2005	0.183	0.164	0.125	0.133	0.244	0.228	0.232	0.278
1159	17/12/2005	0.182	0.163	0.123	0.133	0.244	0.228	0.232	0.277
1759	17/12/2005	0.182	0.163	0.123	0.132	0.243	0.228	0.232	0.278
2359	17/12/2005	0.182	0.163	0.122	0.131	0.243	0.228	0.233	0.278
559	18/12/2005	0.181	0.162	0.121	0.13	0.243	0.227	0.232	0.278
1159	18/12/2005	0.181	0.162	0.121	0.129	0.241	0.227	0.232	0.277
1759	18/12/2005	0.182	0.162	0.121	0.129	0.242	0.227	0.232	0.278
2359	18/12/2005	0.182	0.163	0.121	0.129	0.242	0.227	0.233	0.279
559	19/12/2005	0.182	0.162	0.121	0.128	0.241	0.227	0.232	0.278
1159	19/12/2005	0.182	0.162	0.12	0.127	0.24	0.226	0.232	0.277
1759	19/12/2005	0.184	0.163	0.121	0.127	0.24	0.226	0.232	0.278
2359	19/12/2005	0.185	0.163	0.121	0.127	0.239	0.226	0.233	0.278
559	20/12/2005	0.184	0.163	0.121	0.127	0.239	0.226	0.232	0.278

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	20/12/2005	0.183	0.163	0.121	0.127	0.237	0.226	0.232	0.277
1759	20/12/2005	0.183	0.163	0.121	0.127	0.237	0.226	0.233	0.278
2359	20/12/2005	0.182	0.162	0.12	0.127	0.235	0.225	0.232	0.277
559	21/12/2005	0.183	0.162	0.12	0.126	0.234	0.225	0.232	0.277
1159	21/12/2005	0.183	0.163	0.121	0.126	0.233	0.225	0.232	0.277
1759	21/12/2005	0.184	0.163	0.121	0.126	0.231	0.225	0.232	0.278
2359	21/12/2005	0.185	0.164	0.121	0.126	0.23	0.225	0.233	0.279
559	22/12/2005	0.185	0.164	0.122	0.126	0.228	0.225	0.233	0.278
1159	22/12/2005	0.185	0.164	0.122	0.126	0.226	0.224	0.232	0.278
1759	22/12/2005	0.186	0.164	0.122	0.126	0.224	0.224	0.232	0.278
2359	22/12/2005	0.187	0.165	0.122	0.127	0.223	0.224	0.232	0.278
559	23/12/2005	0.187	0.165	0.123	0.127	0.222	0.223	0.232	0.278
1159	23/12/2005	0.187	0.165	0.123	0.127	0.221	0.223	0.232	0.278
1759	23/12/2005	0.187	0.165	0.123	0.127	0.22	0.222	0.232	0.277
2359	23/12/2005	0.187	0.165	0.123	0.127	0.22	0.222	0.232	0.278
559	24/12/2005	0.187	0.165	0.123	0.127	0.22	0.222	0.232	0.279
1159	24/12/2005	0.185	0.164	0.122	0.127	0.218	0.221	0.231	0.277
1759	24/12/2005	0.186	0.165	0.123	0.127	0.219	0.221	0.232	0.278
2359	24/12/2005	0.186	0.165	0.122	0.127	0.218	0.22	0.232	0.277
559	25/12/2005	0.187	0.165	0.123	0.127	0.218	0.22	0.232	0.278
1159	25/12/2005	0.188	0.165	0.123	0.127	0.218	0.22	0.232	0.278
1759	25/12/2005	0.188	0.166	0.123	0.127	0.217	0.22	0.232	0.278
2359	25/12/2005	0.187	0.165	0.123	0.127	0.216	0.218	0.231	0.277
559	26/12/2005	0.187	0.165	0.123	0.127	0.216	0.218	0.231	0.277
1159	26/12/2005	0.188	0.166	0.123	0.127	0.216	0.218	0.231	0.277
1759	26/12/2005	0.188	0.166	0.124	0.127	0.217	0.218	0.232	0.278
2359	26/12/2005	0.187	0.166	0.124	0.127	0.216	0.217	0.232	0.278
559	27/12/2005	0.187	0.165	0.123	0.127	0.216	0.217	0.231	0.278
1159	27/12/2005	0.187	0.165	0.123	0.127	0.215	0.216	0.231	0.277
1759	27/12/2005	0.187	0.165	0.123	0.127	0.215	0.216	0.231	0.277
2359	27/12/2005	0.187	0.165	0.123	0.127	0.215	0.215	0.231	0.277
559	28/12/2005	0.188	0.166	0.123	0.127	0.215	0.215	0.232	0.278
1159	28/12/2005	0.188	0.166	0.123	0.127	0.214	0.214	0.231	0.277
1759	28/12/2005	0.189	0.166	0.124	0.127	0.214	0.214	0.231	0.278
2359	28/12/2005	0.189	0.166	0.124	0.127	0.214	0.214	0.231	0.278
559	29/12/2005	0.189	0.167	0.124	0.127	0.214	0.213	0.231	0.278
1159	29/12/2005	0.189	0.166	0.124	0.127	0.214	0.213	0.231	0.277
1759	29/12/2005	0.189	0.167	0.124	0.128	0.214	0.213	0.231	0.278
2359	29/12/2005	0.189	0.167	0.125	0.128	0.214	0.212	0.231	0.278
559	30/12/2005	0.189	0.167	0.125	0.128	0.214	0.212	0.231	0.278
1159	30/12/2005	0.189	0.167	0.125	0.128	0.214	0.211	0.231	0.278
1759	30/12/2005	0.189	0.167	0.124	0.128	0.214	0.211	0.231	0.277
2359	30/12/2005	0.188	0.167	0.124	0.128	0.214	0.21	0.231	0.278
559	31/12/2005	0.188	0.166	0.124	0.128	0.214	0.21	0.231	0.278
1159	31/12/2005	0.188	0.166	0.124	0.128	0.213	0.209	0.231	0.277
1759	31/12/2005	0.189	0.166	0.124	0.128	0.213	0.209	0.231	0.278
2359	31/12/2005	0.189	0.167	0.124	0.128	0.213	0.209	0.231	0.278
559	01/01/2006	0.189	0.167	0.124	0.128	0.213	0.208	0.231	0.278
1159	01/01/2006	0.189	0.167	0.124	0.128	0.213	0.208	0.231	0.277
1759	01/01/2006	0.189	0.167	0.125	0.128	0.213	0.208	0.231	0.278
2359	01/01/2006	0.19	0.167	0.125	0.128	0.213	0.207	0.231	0.278
559	02/01/2006	0.19	0.167	0.125	0.128	0.213	0.207	0.231	0.278
1159	02/01/2006	0.191	0.168	0.125	0.128	0.213	0.206	0.231	0.278
1759	02/01/2006	0.191	0.168	0.125	0.128	0.213	0.206	0.231	0.278
2359	02/01/2006	0.192	0.168	0.125	0.128	0.213	0.205	0.231	0.278
559	03/01/2006	0.191	0.168	0.126	0.128	0.213	0.205	0.231	0.278
1159	03/01/2006	0.193	0.168	0.126	0.128	0.213	0.205	0.231	0.278
1759	03/01/2006	0.194	0.168	0.126	0.128	0.213	0.205	0.231	0.279
2359	03/01/2006	0.195	0.168	0.126	0.129	0.213	0.204	0.231	0.278
559	04/01/2006	0.193	0.167	0.125	0.128	0.213	0.203	0.231	0.278
1159	04/01/2006	0.192	0.167	0.125	0.129	0.213	0.203	0.231	0.278
1759	04/01/2006	0.192	0.166	0.125	0.128	0.213	0.202	0.231	0.278
2359	04/01/2006	0.191	0.166	0.124	0.128	0.213	0.202	0.23	0.277
559	05/01/2006	0.19	0.166	0.124	0.128	0.213	0.202	0.231	0.277
1159	05/01/2006	0.191	0.165	0.123	0.127	0.213	0.201	0.23	0.277
1759	05/01/2006	0.19	0.165	0.123	0.127	0.212	0.201	0.23	0.277
2359	05/01/2006	0.191	0.165	0.123	0.127	0.212	0.2	0.23	0.278
559	06/01/2006	0.191	0.166	0.123	0.127	0.212	0.2	0.231	0.278
1159	06/01/2006	0.192	0.166	0.124	0.127	0.212	0.2	0.231	0.278
1759	06/01/2006	0.192	0.166	0.123	0.127	0.211	0.199	0.23	0.278
2359	06/01/2006	0.193	0.166	0.123	0.127	0.211	0.199	0.231	0.278
559	07/01/2006	0.194	0.166	0.123	0.127	0.211	0.198	0.231	0.278

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	07/01/2006	0.193	0.166	0.123	0.127	0.21	0.198	0.23	0.277
1759	07/01/2006	0.193	0.166	0.123	0.127	0.21	0.198	0.231	0.278
2359	07/01/2006	0.196	0.166	0.123	0.127	0.21	0.197	0.231	0.278
559	08/01/2006	0.196	0.166	0.123	0.127	0.21	0.197	0.23	0.278
1159	08/01/2006	0.194	0.165	0.123	0.127	0.209	0.196	0.23	0.277
1759	08/01/2006	0.191	0.166	0.123	0.127	0.209	0.196	0.23	0.278
2359	08/01/2006	0.194	0.166	0.123	0.127	0.209	0.196	0.231	0.278
559	09/01/2006	0.196	0.166	0.123	0.127	0.209	0.196	0.231	0.279
1159	09/01/2006	0.193	0.165	0.123	0.126	0.208	0.194	0.23	0.277
1759	09/01/2006	0.194	0.165	0.123	0.127	0.209	0.195	0.231	0.279
2359	09/01/2006	0.189	0.165	0.122	0.126	0.208	0.194	0.23	0.277
559	10/01/2006	0.193	0.165	0.123	0.127	0.208	0.193	0.23	0.278
1159	10/01/2006	0.192	0.165	0.122	0.126	0.207	0.193	0.23	0.277
1759	10/01/2006	0.191	0.165	0.122	0.126	0.207	0.193	0.23	0.277
2359	10/01/2006	0.19	0.165	0.122	0.126	0.207	0.192	0.23	0.277
559	11/01/2006	0.191	0.165	0.123	0.126	0.207	0.192	0.23	0.278
1159	11/01/2006	0.192	0.165	0.122	0.126	0.206	0.191	0.23	0.277
1759	11/01/2006	0.191	0.166	0.123	0.126	0.206	0.191	0.23	0.278
2359	11/01/2006	0.191	0.165	0.123	0.126	0.206	0.191	0.23	0.278
559	12/01/2006	0.194	0.166	0.123	0.126	0.206	0.19	0.23	0.278
1159	12/01/2006	0.196	0.166	0.123	0.126	0.205	0.19	0.23	0.278
1759	12/01/2006	0.197	0.166	0.123	0.126	0.205	0.189	0.23	0.278
2359	12/01/2006	0.197	0.165	0.123	0.126	0.205	0.188	0.23	0.278
559	13/01/2006	0.197	0.165	0.123	0.126	0.204	0.188	0.23	0.277
1159	13/01/2006	0.196	0.165	0.123	0.126	0.204	0.187	0.23	0.277
1759	13/01/2006	0.195	0.165	0.123	0.126	0.204	0.187	0.23	0.278
2359	13/01/2006	0.196	0.165	0.123	0.126	0.204	0.187	0.23	0.278
559	14/01/2006	0.193	0.165	0.122	0.126	0.203	0.185	0.229	0.277
1159	14/01/2006	0.193	0.165	0.123	0.126	0.204	0.186	0.23	0.278
1759	14/01/2006	0.192	0.166	0.123	0.126	0.203	0.185	0.23	0.278
2359	14/01/2006	0.193	0.166	0.123	0.126	0.203	0.184	0.23	0.278
559	15/01/2006	0.193	0.165	0.123	0.126	0.203	0.184	0.23	0.277
1159	15/01/2006	0.196	0.165	0.123	0.126	0.203	0.183	0.23	0.278
1759	15/01/2006	0.196	0.166	0.123	0.126	0.203	0.183	0.23	0.278
2359	15/01/2006	0.196	0.165	0.123	0.126	0.202	0.182	0.23	0.278
559	16/01/2006	0.196	0.166	0.123	0.126	0.202	0.182	0.23	0.278
1159	16/01/2006	0.198	0.165	0.123	0.126	0.202	0.181	0.229	0.277
1759	16/01/2006	0.198	0.166	0.123	0.127	0.203	0.182	0.231	0.28
2359	16/01/2006	0.196	0.165	0.122	0.126	0.201	0.18	0.229	0.277
559	17/01/2006	0.195	0.165	0.122	0.126	0.202	0.179	0.23	0.278
1159	17/01/2006	0.194	0.165	0.122	0.125	0.201	0.178	0.229	0.277
1759	17/01/2006	0.193	0.165	0.122	0.125	0.201	0.178	0.23	0.278
2359	17/01/2006	0.194	0.165	0.122	0.125	0.201	0.177	0.23	0.278
559	18/01/2006	0.195	0.165	0.122	0.125	0.201	0.177	0.23	0.278
1159	18/01/2006	0.199	0.165	0.122	0.125	0.2	0.176	0.23	0.278
1759	18/01/2006	0.198	0.165	0.122	0.125	0.2	0.176	0.23	0.278
2359	18/01/2006	0.199	0.165	0.122	0.125	0.2	0.175	0.23	0.278
559	19/01/2006	0.205	0.165	0.122	0.125	0.2	0.174	0.23	0.279
1159	19/01/2006	0.203	0.165	0.122	0.125	0.199	0.173	0.229	0.277
1759	19/01/2006	0.203	0.165	0.122	0.126	0.2	0.174	0.231	0.28
2359	19/01/2006	0.206	0.165	0.122	0.125	0.199	0.172	0.23	0.279
559	20/01/2006	0.208	0.164	0.121	0.125	0.199	0.172	0.229	0.278
1159	20/01/2006	0.205	0.164	0.121	0.124	0.198	0.17	0.229	0.277
1759	20/01/2006	0.203	0.164	0.121	0.124	0.198	0.17	0.229	0.278
2359	20/01/2006	0.203	0.163	0.12	0.124	0.197	0.169	0.229	0.277
559	21/01/2006	0.204	0.163	0.12	0.124	0.198	0.169	0.23	0.278
1159	21/01/2006	0.202	0.163	0.119	0.123	0.196	0.167	0.228	0.275
1759	21/01/2006	0.194	0.163	0.12	0.123	0.197	0.167	0.229	0.278
2359	21/01/2006	0.191	0.163	0.119	0.122	0.196	0.166	0.229	0.277
559	22/01/2006	0.188	0.163	0.119	0.122	0.196	0.166	0.229	0.277
1159	22/01/2006	0.184	0.163	0.119	0.122	0.195	0.165	0.229	0.277
1759	22/01/2006	0.182	0.164	0.119	0.122	0.196	0.165	0.229	0.278
2359	22/01/2006	0.182	0.163	0.119	0.121	0.195	0.164	0.229	0.277
559	23/01/2006	0.185	0.164	0.12	0.121	0.194	0.163	0.229	0.277
1159	23/01/2006	0.183	0.164	0.12	0.122	0.194	0.162	0.229	0.277
1759	23/01/2006	0.187	0.165	0.121	0.122	0.195	0.162	0.229	0.278
2359	23/01/2006	0.198	0.165	0.121	0.122	0.195	0.162	0.229	0.279
559	24/01/2006	0.201	0.165	0.121	0.122	0.194	0.16	0.229	0.277
1159	24/01/2006	0.199	0.164	0.12	0.121	0.193	0.159	0.228	0.276
1759	24/01/2006	0.196	0.164	0.121	0.122	0.193	0.159	0.229	0.278
2359	24/01/2006	0.197	0.164	0.12	0.122	0.194	0.159	0.229	0.278
559	25/01/2006	0.197	0.164	0.12	0.122	0.193	0.158	0.229	0.278

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	25/01/2006	0.193	0.163	0.119	0.121	0.191	0.156	0.227	0.275
1759	25/01/2006	0.189	0.164	0.12	0.122	0.193	0.157	0.229	0.279
2359	25/01/2006	0.196	0.164	0.12	0.122	0.193	0.157	0.229	0.279
559	26/01/2006	0.196	0.164	0.119	0.121	0.192	0.156	0.228	0.277
1159	26/01/2006	0.195	0.164	0.119	0.121	0.192	0.155	0.229	0.278
1759	26/01/2006	0.198	0.164	0.12	0.121	0.192	0.155	0.229	0.279
2359	26/01/2006	0.201	0.163	0.119	0.121	0.192	0.154	0.229	0.278
559	27/01/2006	0.202	0.163	0.119	0.121	0.191	0.154	0.228	0.277
1159	27/01/2006	0.201	0.162	0.119	0.12	0.19	0.153	0.228	0.276
1759	27/01/2006	0.198	0.162	0.118	0.12	0.19	0.153	0.229	0.277
2359	27/01/2006	0.196	0.162	0.118	0.12	0.19	0.152	0.228	0.277
559	28/01/2006	0.196	0.162	0.118	0.12	0.19	0.152	0.228	0.277
1159	28/01/2006	0.193	0.162	0.117	0.119	0.189	0.151	0.228	0.276
1759	28/01/2006	0.191	0.162	0.118	0.119	0.19	0.151	0.229	0.278
2359	28/01/2006	0.191	0.162	0.117	0.119	0.189	0.151	0.228	0.277
559	29/01/2006	0.193	0.162	0.118	0.119	0.189	0.15	0.228	0.278
1159	29/01/2006	0.192	0.162	0.117	0.118	0.188	0.149	0.228	0.277
1759	29/01/2006	0.189	0.163	0.118	0.118	0.188	0.149	0.228	0.278
2359	29/01/2006	0.192	0.163	0.118	0.119	0.188	0.149	0.228	0.278
559	30/01/2006	0.196	0.163	0.118	0.118	0.188	0.148	0.228	0.278
1159	30/01/2006	0.194	0.163	0.117	0.118	0.186	0.147	0.227	0.277
1759	30/01/2006	0.193	0.163	0.118	0.118	0.187	0.147	0.228	0.278
2359	30/01/2006	0.197	0.162	0.117	0.118	0.187	0.147	0.228	0.277
559	31/01/2006	0.2	0.162	0.117	0.118	0.186	0.146	0.228	0.277
1159	31/01/2006	0.197	0.161	0.116	0.117	0.184	0.145	0.226	0.275
1759	31/01/2006	0.193	0.162	0.116	0.118	0.186	0.146	0.227	0.277
2359	31/01/2006	0.19	0.162	0.116	0.117	0.185	0.145	0.227	0.276
559	01/02/2006	0.189	0.162	0.116	0.117	0.185	0.145	0.227	0.278
1159	01/02/2006	0.189	0.162	0.116	0.117	0.184	0.144	0.227	0.276
1759	01/02/2006	0.188	0.162	0.117	0.117	0.186	0.145	0.228	0.281
2359	01/02/2006	0.19	0.162	0.116	0.116	0.184	0.144	0.227	0.277
559	02/02/2006	0.19	0.162	0.116	0.117	0.184	0.143	0.227	0.278
1159	02/02/2006	0.188	0.162	0.116	0.116	0.183	0.142	0.226	0.276
1759	02/02/2006	0.185	0.162	0.117	0.117	0.184	0.143	0.228	0.281
2359	02/02/2006	0.187	0.162	0.116	0.116	0.183	0.142	0.227	0.278
559	03/02/2006	0.191	0.162	0.116	0.116	0.183	0.142	0.226	0.278
1159	03/02/2006	0.187	0.162	0.116	0.116	0.182	0.141	0.225	0.276
1759	03/02/2006	0.182	0.162	0.116	0.116	0.182	0.141	0.226	0.278
2359	03/02/2006	0.186	0.162	0.116	0.116	0.183	0.141	0.226	0.279
559	04/02/2006	0.19	0.162	0.116	0.116	0.182	0.141	0.225	0.278
1159	04/02/2006	0.188	0.162	0.116	0.116	0.181	0.14	0.224	0.277
1759	04/02/2006	0.187	0.162	0.116	0.116	0.181	0.14	0.225	0.278
2359	04/02/2006	0.187	0.162	0.116	0.116	0.181	0.14	0.224	0.277
559	05/02/2006	0.188	0.162	0.116	0.116	0.181	0.139	0.224	0.277
1159	05/02/2006	0.188	0.162	0.116	0.116	0.18	0.139	0.223	0.277
1759	05/02/2006	0.189	0.163	0.116	0.116	0.18	0.139	0.223	0.278
2359	05/02/2006	0.192	0.163	0.116	0.116	0.18	0.139	0.222	0.277
559	06/02/2006	0.194	0.163	0.117	0.116	0.181	0.139	0.222	0.278
1159	06/02/2006	0.194	0.162	0.116	0.116	0.18	0.138	0.22	0.276
1759	06/02/2006	0.191	0.163	0.117	0.116	0.18	0.138	0.22	0.278
2359	06/02/2006	0.193	0.163	0.116	0.116	0.18	0.137	0.219	0.277
559	07/02/2006	0.193	0.163	0.116	0.116	0.18	0.137	0.218	0.277
1159	07/02/2006	0.193	0.163	0.116	0.116	0.179	0.137	0.217	0.277
1759	07/02/2006	0.189	0.163	0.117	0.116	0.18	0.137	0.217	0.278
2359	07/02/2006	0.187	0.163	0.116	0.116	0.179	0.137	0.215	0.277
559	08/02/2006	0.187	0.163	0.117	0.116	0.179	0.137	0.214	0.277
1159	08/02/2006	0.186	0.163	0.116	0.116	0.179	0.137	0.212	0.277
1759	08/02/2006	0.181	0.163	0.117	0.116	0.18	0.137	0.212	0.279
2359	08/02/2006	0.184	0.163	0.117	0.116	0.179	0.137	0.21	0.277
559	09/02/2006	0.184	0.164	0.117	0.116	0.179	0.137	0.208	0.277
1159	09/02/2006	0.185	0.164	0.117	0.116	0.179	0.136	0.207	0.276
1759	09/02/2006	0.186	0.164	0.118	0.116	0.179	0.136	0.206	0.279
2359	09/02/2006	0.194	0.164	0.118	0.117	0.18	0.137	0.204	0.279
559	10/02/2006	0.197	0.164	0.118	0.116	0.179	0.136	0.203	0.278
1159	10/02/2006	0.195	0.163	0.117	0.116	0.178	0.136	0.201	0.276
1759	10/02/2006	0.188	0.164	0.118	0.116	0.179	0.136	0.2	0.277
2359	10/02/2006	0.19	0.164	0.117	0.116	0.179	0.136	0.199	0.278
559	11/02/2006	0.191	0.164	0.117	0.116	0.179	0.136	0.198	0.277
1159	11/02/2006	0.187	0.163	0.117	0.116	0.178	0.135	0.196	0.276
1759	11/02/2006	0.185	0.164	0.118	0.117	0.18	0.136	0.196	0.28
2359	11/02/2006	0.187	0.163	0.117	0.116	0.179	0.136	0.195	0.278
559	12/02/2006	0.189	0.163	0.117	0.116	0.178	0.135	0.193	0.276

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	12/02/2006	0.182	0.163	0.117	0.116	0.178	0.135	0.192	0.276
1759	12/02/2006	0.178	0.164	0.117	0.116	0.179	0.136	0.192	0.279
2359	12/02/2006	0.189	0.164	0.117	0.116	0.179	0.135	0.191	0.277
559	13/02/2006	0.183	0.163	0.117	0.116	0.177	0.135	0.19	0.276
1159	13/02/2006	0.183	0.164	0.117	0.116	0.178	0.135	0.19	0.277
1759	13/02/2006	0.187	0.165	0.118	0.116	0.179	0.135	0.189	0.278
2359	13/02/2006	0.201	0.166	0.118	0.117	0.179	0.135	0.188	0.278
559	14/02/2006	0.206	0.165	0.119	0.117	0.179	0.136	0.188	0.279
1159	14/02/2006	0.2	0.165	0.119	0.117	0.179	0.135	0.187	0.278
1759	14/02/2006	0.198	0.164	0.118	0.117	0.179	0.136	0.188	0.279
2359	14/02/2006	0.2	0.163	0.118	0.117	0.179	0.135	0.187	0.278
559	15/02/2006	0.2	0.163	0.117	0.116	0.179	0.135	0.187	0.277
1159	15/02/2006	0.197	0.162	0.116	0.116	0.179	0.135	0.186	0.277
1759	15/02/2006	0.197	0.161	0.116	0.116	0.179	0.135	0.186	0.279
2359	15/02/2006	0.199	0.16	0.115	0.115	0.178	0.135	0.186	0.278
559	16/02/2006	0.203	0.159	0.114	0.115	0.178	0.135	0.186	0.277
1159	16/02/2006	0.198	0.158	0.112	0.113	0.176	0.134	0.185	0.274
1759	16/02/2006	0.191	0.159	0.112	0.114	0.178	0.135	0.185	0.279
2359	16/02/2006	0.193	0.158	0.11	0.112	0.177	0.134	0.184	0.276
559	17/02/2006	0.19	0.158	0.11	0.112	0.177	0.134	0.185	0.277
1159	17/02/2006	0.186	0.158	0.109	0.111	0.175	0.133	0.184	0.276
1759	17/02/2006	0.183	0.158	0.109	0.111	0.176	0.134	0.184	0.279
2359	17/02/2006	0.187	0.158	0.109	0.11	0.175	0.134	0.184	0.277
559	18/02/2006	0.185	0.158	0.109	0.11	0.175	0.133	0.183	0.277
1159	18/02/2006	0.183	0.158	0.108	0.109	0.173	0.133	0.183	0.275
1759	18/02/2006	0.179	0.159	0.109	0.11	0.174	0.133	0.183	0.279
2359	18/02/2006	0.182	0.159	0.109	0.109	0.173	0.132	0.182	0.277
559	19/02/2006	0.181	0.159	0.109	0.109	0.172	0.132	0.182	0.277
1159	19/02/2006	0.181	0.159	0.109	0.109	0.172	0.132	0.182	0.277
1759	19/02/2006	0.183	0.16	0.11	0.11	0.172	0.131	0.182	0.277
2359	19/02/2006	0.193	0.16	0.11	0.109	0.171	0.131	0.181	0.277
559	20/02/2006	0.19	0.16	0.11	0.11	0.171	0.131	0.181	0.277
1159	20/02/2006	0.188	0.159	0.11	0.109	0.17	0.13	0.181	0.276
1759	20/02/2006	0.184	0.16	0.11	0.11	0.171	0.13	0.181	0.278
2359	20/02/2006	0.185	0.16	0.11	0.11	0.17	0.13	0.181	0.277
559	21/02/2006	0.186	0.16	0.11	0.11	0.17	0.129	0.18	0.277
1159	21/02/2006	0.185	0.16	0.11	0.109	0.169	0.129	0.18	0.276
1759	21/02/2006	0.184	0.16	0.111	0.11	0.17	0.13	0.181	0.279
2359	21/02/2006	0.193	0.16	0.11	0.11	0.17	0.129	0.18	0.278
559	22/02/2006	0.194	0.16	0.11	0.11	0.169	0.129	0.18	0.277
1159	22/02/2006	0.188	0.16	0.11	0.109	0.168	0.128	0.179	0.275
1759	22/02/2006	0.186	0.16	0.111	0.11	0.17	0.129	0.18	0.28
2359	22/02/2006	0.191	0.16	0.11	0.11	0.169	0.128	0.18	0.278
559	23/02/2006	0.191	0.16	0.11	0.11	0.169	0.128	0.18	0.278
1159	23/02/2006	0.189	0.16	0.11	0.109	0.169	0.128	0.179	0.277
1759	23/02/2006	0.19	0.16	0.11	0.11	0.169	0.128	0.18	0.279
2359	23/02/2006	0.194	0.16	0.11	0.109	0.168	0.128	0.179	0.277
559	24/02/2006	0.193	0.159	0.11	0.109	0.168	0.128	0.179	0.277
1159	24/02/2006	0.19	0.159	0.109	0.109	0.167	0.127	0.179	0.275
1759	24/02/2006	0.189	0.159	0.109	0.109	0.168	0.127	0.179	0.278
2359	24/02/2006	0.194	0.159	0.109	0.109	0.168	0.127	0.179	0.278
559	25/02/2006	0.197	0.159	0.109	0.108	0.166	0.126	0.179	0.275
1159	25/02/2006	0.194	0.159	0.109	0.108	0.167	0.127	0.179	0.276
1759	25/02/2006	0.19	0.159	0.109	0.109	0.167	0.127	0.179	0.279
2359	25/02/2006	0.196	0.159	0.109	0.108	0.167	0.127	0.179	0.278
559	26/02/2006	0.2	0.159	0.109	0.108	0.166	0.126	0.179	0.277
1159	26/02/2006	0.195	0.158	0.108	0.107	0.165	0.125	0.178	0.275
1759	26/02/2006	0.186	0.159	0.108	0.107	0.166	0.126	0.179	0.278
2359	26/02/2006	0.193	0.159	0.108	0.108	0.166	0.126	0.179	0.278
559	27/02/2006	0.193	0.158	0.108	0.107	0.165	0.125	0.179	0.277
1159	27/02/2006	0.188	0.158	0.107	0.107	0.164	0.125	0.178	0.276
1759	27/02/2006	0.185	0.158	0.107	0.107	0.164	0.125	0.178	0.277
2359	27/02/2006	0.185	0.158	0.107	0.106	0.164	0.125	0.179	0.277
559	28/02/2006	0.189	0.158	0.107	0.106	0.164	0.125	0.179	0.278
1159	28/02/2006	0.186	0.158	0.107	0.106	0.163	0.124	0.178	0.277
1759	28/02/2006	0.182	0.159	0.107	0.106	0.164	0.125	0.179	0.281
2359	28/02/2006	0.19	0.158	0.107	0.106	0.163	0.124	0.178	0.278
559	01/03/2006	0.191	0.158	0.107	0.106	0.163	0.124	0.178	0.278
1159	01/03/2006	0.188	0.158	0.106	0.106	0.162	0.123	0.178	0.276
1759	01/03/2006	0.185	0.158	0.107	0.105	0.162	0.124	0.178	0.277
2359	01/03/2006	0.19	0.158	0.107	0.105	0.162	0.124	0.178	0.278
559	02/03/2006	0.194	0.158	0.107	0.105	0.162	0.123	0.178	0.278

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	02/03/2006	0.191	0.158	0.107	0.105	0.161	0.123	0.178	0.276
1759	02/03/2006	0.181	0.159	0.107	0.106	0.162	0.123	0.179	0.28
2359	02/03/2006	0.188	0.158	0.106	0.105	0.161	0.123	0.178	0.278
559	03/03/2006	0.19	0.158	0.106	0.105	0.161	0.122	0.178	0.278
1159	03/03/2006	0.185	0.158	0.106	0.104	0.16	0.122	0.178	0.276
1759	03/03/2006	0.179	0.158	0.106	0.105	0.16	0.122	0.178	0.278
2359	03/03/2006	0.184	0.158	0.106	0.105	0.16	0.122	0.178	0.277
559	04/03/2006	0.184	0.158	0.106	0.104	0.159	0.121	0.178	0.277
1159	04/03/2006	0.183	0.158	0.106	0.104	0.159	0.121	0.178	0.276
1759	04/03/2006	0.181	0.158	0.106	0.105	0.16	0.121	0.178	0.277
2359	04/03/2006	0.186	0.158	0.106	0.105	0.16	0.121	0.178	0.278
559	05/03/2006	0.189	0.158	0.107	0.105	0.159	0.121	0.178	0.278
1159	05/03/2006	0.185	0.158	0.106	0.104	0.158	0.121	0.177	0.276
1759	05/03/2006	0.179	0.159	0.107	0.105	0.159	0.121	0.178	0.279
2359	05/03/2006	0.184	0.158	0.106	0.105	0.159	0.121	0.178	0.277
559	06/03/2006	0.184	0.158	0.106	0.105	0.159	0.121	0.178	0.277
1159	06/03/2006	0.181	0.158	0.106	0.104	0.158	0.12	0.177	0.276
1759	06/03/2006	0.176	0.159	0.107	0.105	0.159	0.121	0.178	0.279
2359	06/03/2006	0.183	0.159	0.107	0.105	0.159	0.121	0.178	0.278
559	07/03/2006	0.187	0.159	0.107	0.105	0.159	0.12	0.178	0.278
1159	07/03/2006	0.179	0.158	0.106	0.104	0.158	0.12	0.177	0.276
1759	07/03/2006	0.174	0.159	0.107	0.105	0.159	0.12	0.178	0.279
2359	07/03/2006	0.178	0.158	0.106	0.105	0.158	0.12	0.177	0.277
559	08/03/2006	0.184	0.159	0.107	0.105	0.158	0.12	0.178	0.277
1159	08/03/2006	0.177	0.159	0.107	0.105	0.158	0.12	0.177	0.276
1759	08/03/2006	0.173	0.159	0.107	0.105	0.158	0.12	0.178	0.278
2359	08/03/2006	0.176	0.159	0.107	0.105	0.158	0.12	0.177	0.277
559	09/03/2006	0.181	0.159	0.107	0.105	0.158	0.12	0.177	0.277
1159	09/03/2006	0.18	0.159	0.107	0.105	0.158	0.12	0.177	0.276
1759	09/03/2006	0.18	0.16	0.108	0.105	0.158	0.12	0.177	0.277
2359	09/03/2006	0.181	0.16	0.108	0.105	0.158	0.12	0.177	0.277
559	10/03/2006	0.183	0.16	0.108	0.105	0.159	0.12	0.177	0.277
1159	10/03/2006	0.183	0.16	0.108	0.105	0.158	0.12	0.177	0.276
1759	10/03/2006	0.181	0.16	0.108	0.106	0.159	0.12	0.177	0.277
2359	10/03/2006	0.186	0.16	0.109	0.106	0.159	0.12	0.177	0.277
559	11/03/2006	0.186	0.16	0.108	0.106	0.159	0.12	0.177	0.277
1159	11/03/2006	0.186	0.16	0.108	0.106	0.159	0.12	0.177	0.276
1759	11/03/2006	0.185	0.16	0.109	0.106	0.16	0.121	0.177	0.278
2359	11/03/2006	0.192	0.16	0.109	0.106	0.16	0.121	0.177	0.278
559	12/03/2006	0.194	0.16	0.108	0.106	0.16	0.121	0.177	0.277
1159	12/03/2006	0.186	0.159	0.108	0.105	0.159	0.12	0.177	0.276
1759	12/03/2006	0.18	0.159	0.108	0.106	0.16	0.121	0.178	0.28
2359	12/03/2006	0.189	0.159	0.108	0.106	0.16	0.121	0.178	0.278
559	13/03/2006	0.191	0.159	0.108	0.105	0.159	0.121	0.177	0.277
1159	13/03/2006	0.184	0.158	0.107	0.105	0.158	0.12	0.177	0.275
1759	13/03/2006	0.18	0.159	0.107	0.105	0.159	0.121	0.177	0.278
2359	13/03/2006	0.186	0.159	0.107	0.105	0.159	0.121	0.177	0.278
559	14/03/2006	0.19	0.159	0.107	0.105	0.159	0.12	0.177	0.277
1159	14/03/2006	0.19	0.158	0.107	0.105	0.159	0.12	0.177	0.277
1759	14/03/2006	0.182	0.158	0.107	0.105	0.159	0.12	0.177	0.277
2359	14/03/2006	0.183	0.158	0.106	0.105	0.158	0.12	0.177	0.277
559	15/03/2006	0.185	0.158	0.106	0.105	0.158	0.12	0.177	0.277
1159	15/03/2006	0.18	0.158	0.106	0.104	0.158	0.12	0.177	0.276
1759	15/03/2006	0.175	0.158	0.106	0.104	0.158	0.12	0.177	0.277
2359	15/03/2006	0.182	0.158	0.106	0.104	0.158	0.12	0.177	0.277
559	16/03/2006	0.187	0.158	0.107	0.105	0.158	0.12	0.177	0.278
1159	16/03/2006	0.18	0.158	0.106	0.104	0.158	0.12	0.177	0.276
1759	16/03/2006	0.177	0.158	0.106	0.104	0.158	0.12	0.177	0.278
2359	16/03/2006	0.184	0.158	0.106	0.104	0.158	0.12	0.177	0.277
559	17/03/2006	0.185	0.158	0.106	0.104	0.158	0.12	0.177	0.277
1159	17/03/2006	0.184	0.158	0.106	0.104	0.157	0.119	0.177	0.276
1759	17/03/2006	0.179	0.158	0.106	0.104	0.158	0.12	0.177	0.277
2359	17/03/2006	0.181	0.158	0.106	0.104	0.158	0.119	0.177	0.277
559	18/03/2006	0.183	0.158	0.106	0.104	0.158	0.119	0.177	0.277
1159	18/03/2006	0.183	0.158	0.106	0.104	0.157	0.119	0.177	0.276
1759	18/03/2006	0.18	0.159	0.107	0.104	0.158	0.119	0.177	0.277
2359	18/03/2006	0.182	0.159	0.107	0.104	0.157	0.119	0.177	0.277
559	19/03/2006	0.183	0.159	0.107	0.104	0.157	0.119	0.177	0.277
1159	19/03/2006	0.179	0.158	0.106	0.104	0.157	0.119	0.177	0.276
1759	19/03/2006	0.179	0.159	0.107	0.104	0.157	0.119	0.177	0.277
2359	19/03/2006	0.181	0.159	0.107	0.105	0.157	0.119	0.177	0.277
559	20/03/2006	0.183	0.159	0.107	0.105	0.158	0.119	0.177	0.277



MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	20/03/2006	0.18	0.159	0.107	0.104	0.157	0.119	0.177	0.276
1759	20/03/2006	0.179	0.159	0.107	0.105	0.158	0.119	0.177	0.277
2359	20/03/2006	0.181	0.16	0.108	0.105	0.158	0.119	0.177	0.277
559	21/03/2006	0.184	0.16	0.108	0.105	0.158	0.119	0.177	0.277
1159	21/03/2006	0.18	0.16	0.108	0.105	0.158	0.119	0.177	0.276
1759	21/03/2006	0.178	0.16	0.108	0.105	0.158	0.119	0.177	0.277
2359	21/03/2006	0.182	0.16	0.108	0.106	0.158	0.12	0.177	0.278
559	22/03/2006	0.185	0.16	0.109	0.106	0.158	0.119	0.177	0.277
1159	22/03/2006	0.182	0.16	0.108	0.106	0.158	0.119	0.177	0.276
1759	22/03/2006	0.18	0.16	0.109	0.106	0.158	0.12	0.177	0.277
2359	22/03/2006	0.185	0.161	0.109	0.106	0.159	0.12	0.177	0.278
559	23/03/2006	0.189	0.161	0.11	0.106	0.159	0.12	0.177	0.278
1159	23/03/2006	0.184	0.162	0.11	0.106	0.158	0.12	0.177	0.276
1759	23/03/2006	0.184	0.162	0.11	0.107	0.159	0.12	0.177	0.277
2359	23/03/2006	0.192	0.163	0.111	0.107	0.159	0.12	0.177	0.278
559	24/03/2006	0.198	0.164	0.112	0.107	0.16	0.12	0.177	0.277
1159	24/03/2006	0.193	0.165	0.112	0.107	0.159	0.12	0.177	0.276
1759	24/03/2006	0.19	0.166	0.113	0.108	0.16	0.121	0.177	0.278
2359	24/03/2006	0.196	0.166	0.114	0.108	0.16	0.121	0.177	0.277
559	25/03/2006	0.2	0.167	0.114	0.109	0.161	0.121	0.177	0.277
1159	25/03/2006	0.197	0.167	0.114	0.109	0.161	0.121	0.177	0.276
1759	25/03/2006	0.195	0.167	0.115	0.109	0.161	0.121	0.177	0.277
2359	25/03/2006	0.198	0.168	0.115	0.11	0.162	0.121	0.177	0.277
559	26/03/2006	0.201	0.168	0.116	0.11	0.162	0.121	0.177	0.277
1159	26/03/2006	0.2	0.169	0.116	0.11	0.162	0.121	0.177	0.276
1803	26/03/2006	0.2	0.169	0.117	0.111	0.163	0.122	0.177	0.277
2359	26/03/2006	0.202	0.169	0.117	0.111	0.163	0.122	0.177	0.277
559	27/03/2006	0.202	0.17	0.117	0.111	0.163	0.122	0.177	0.277
1159	27/03/2006	0.201	0.17	0.117	0.111	0.163	0.122	0.177	0.275
1759	27/03/2006	0.2	0.17	0.118	0.112	0.164	0.123	0.177	0.277
2359	27/03/2006	0.208	0.171	0.119	0.112	0.164	0.123	0.177	0.277
559	28/03/2006	0.209	0.171	0.119	0.113	0.165	0.123	0.177	0.277
1159	28/03/2006	0.205	0.171	0.119	0.113	0.165	0.123	0.177	0.276
1759	28/03/2006	0.202	0.172	0.12	0.113	0.166	0.124	0.177	0.278
2359	28/03/2006	0.212	0.172	0.12	0.114	0.166	0.124	0.177	0.277
559	29/03/2006	0.212	0.172	0.121	0.114	0.167	0.124	0.177	0.278
1159	29/03/2006	0.197	0.171	0.12	0.114	0.166	0.124	0.177	0.276
1759	29/03/2006	0.196	0.171	0.12	0.114	0.167	0.124	0.177	0.278
2359	29/03/2006	0.203	0.172	0.12	0.114	0.167	0.124	0.177	0.277
559	30/03/2006	0.203	0.172	0.12	0.114	0.167	0.124	0.177	0.276
1159	30/03/2006	0.196	0.171	0.12	0.114	0.167	0.125	0.177	0.276
1759	30/03/2006	0.194	0.172	0.121	0.115	0.168	0.125	0.178	0.278
2359	30/03/2006	0.202	0.172	0.121	0.115	0.168	0.125	0.177	0.278
559	31/03/2006	0.206	0.173	0.122	0.115	0.168	0.125	0.178	0.278
1159	31/03/2006	0.197	0.172	0.121	0.115	0.168	0.125	0.177	0.276
1759	31/03/2006	0.199	0.173	0.122	0.116	0.169	0.126	0.178	0.278
2359	31/03/2006	0.213	0.173	0.122	0.116	0.169	0.126	0.177	0.277
559	01/04/2006	0.221	0.174	0.122	0.116	0.169	0.126	0.178	0.277
1159	01/04/2006	0.218	0.174	0.122	0.116	0.169	0.126	0.177	0.277
1759	01/04/2006	0.215	0.175	0.123	0.116	0.169	0.126	0.178	0.277
2359	01/04/2006	0.224	0.175	0.123	0.116	0.17	0.126	0.177	0.277
559	02/04/2006	0.228	0.175	0.124	0.117	0.17	0.126	0.178	0.278
1159	02/04/2006	0.207	0.175	0.124	0.116	0.169	0.126	0.177	0.276
1759	02/04/2006	0.209	0.175	0.124	0.117	0.17	0.127	0.178	0.278
2359	02/04/2006	0.225	0.176	0.124	0.117	0.171	0.127	0.178	0.277
559	03/04/2006	0.234	0.176	0.124	0.117	0.171	0.127	0.178	0.277
1159	03/04/2006	0.224	0.176	0.124	0.117	0.17	0.127	0.177	0.276
1759	03/04/2006	0.27	0.177	0.125	0.118	0.171	0.127	0.178	0.278
2359	03/04/2006	0.314	0.178	0.125	0.118	0.171	0.127	0.178	0.277
559	04/04/2006	0.333	0.18	0.126	0.118	0.171	0.127	0.178	0.277
1159	04/04/2006	0.309	0.181	0.126	0.118	0.171	0.127	0.177	0.276
1759	04/04/2006	0.324	0.185	0.127	0.119	0.172	0.128	0.178	0.279
2359	04/04/2006	0.352	0.19	0.127	0.119	0.172	0.128	0.178	0.277
559	05/04/2006	0.352	0.194	0.127	0.119	0.172	0.128	0.178	0.277
1159	05/04/2006	0.323	0.198	0.128	0.119	0.172	0.128	0.177	0.276
1759	05/04/2006	0.321	0.212	0.129	0.12	0.173	0.128	0.178	0.278
2359	05/04/2006	0.347	0.249	0.129	0.12	0.173	0.128	0.178	0.277
559	06/04/2006	0.347	0.258	0.13	0.12	0.173	0.128	0.178	0.276
1159	06/04/2006	0.325	0.261	0.13	0.12	0.173	0.128	0.177	0.275
1759	06/04/2006	0.316	0.282	0.131	0.121	0.174	0.129	0.178	0.278
2359	06/04/2006	0.331	0.295	0.132	0.121	0.174	0.129	0.178	0.277
559	07/04/2006	0.329	0.3	0.132	0.121	0.174	0.129	0.178	0.277

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	07/04/2006	0.323	0.302	0.133	0.121	0.174	0.129	0.178	0.276
1759	07/04/2006	0.314	0.311	0.134	0.121	0.174	0.129	0.178	0.276
2359	07/04/2006	0.344	0.315	0.135	0.122	0.175	0.129	0.178	0.277
559	08/04/2006	0.353	0.314	0.136	0.122	0.175	0.13	0.178	0.277
1159	08/04/2006	0.343	0.31	0.136	0.122	0.175	0.129	0.178	0.276
1759	08/04/2006	0.322	0.311	0.138	0.123	0.176	0.13	0.178	0.278
2359	08/04/2006	0.34	0.313	0.139	0.123	0.176	0.13	0.178	0.277
559	09/04/2006	0.339	0.313	0.14	0.123	0.176	0.13	0.178	0.276
1159	09/04/2006	0.319	0.31	0.141	0.123	0.175	0.129	0.178	0.275
1759	09/04/2006	0.313	0.309	0.143	0.124	0.176	0.13	0.178	0.277
2359	09/04/2006	0.318	0.31	0.147	0.124	0.177	0.131	0.178	0.277
559	10/04/2006	0.329	0.31	0.152	0.125	0.177	0.131	0.178	0.277
1159	10/04/2006	0.312	0.309	0.156	0.125	0.177	0.131	0.178	0.276
1759	10/04/2006	0.308	0.304	0.162	0.125	0.178	0.131	0.178	0.277
2359	10/04/2006	0.334	0.303	0.187	0.126	0.178	0.131	0.178	0.277
559	11/04/2006	0.339	0.303	0.199	0.126	0.178	0.131	0.178	0.277
1159	11/04/2006	0.323	0.302	0.194	0.127	0.178	0.131	0.178	0.276
1759	11/04/2006	0.326	0.301	0.2	0.128	0.179	0.132	0.179	0.279
2359	11/04/2006	0.333	0.297	0.207	0.128	0.179	0.132	0.178	0.277
559	12/04/2006	0.337	0.298	0.207	0.128	0.179	0.132	0.178	0.277
1159	12/04/2006	0.301	0.297	0.203	0.129	0.179	0.132	0.178	0.276
1759	12/04/2006	0.288	0.296	0.204	0.13	0.18	0.132	0.179	0.277
2359	12/04/2006	0.311	0.295	0.208	0.131	0.181	0.132	0.179	0.278
559	13/04/2006	0.322	0.295	0.208	0.131	0.181	0.132	0.179	0.277
1159	13/04/2006	0.303	0.295	0.206	0.132	0.18	0.132	0.178	0.276
1759	13/04/2006	0.306	0.294	0.206	0.133	0.18	0.132	0.178	0.276
2359	13/04/2006	0.32	0.292	0.207	0.134	0.181	0.133	0.179	0.277
559	14/04/2006	0.307	0.292	0.206	0.135	0.181	0.133	0.178	0.276
1159	14/04/2006	0.297	0.292	0.205	0.137	0.181	0.133	0.178	0.276
1759	14/04/2006	0.29	0.292	0.206	0.139	0.183	0.134	0.179	0.278
2359	14/04/2006	0.303	0.289	0.206	0.141	0.183	0.133	0.179	0.277
559	15/04/2006	0.3	0.289	0.206	0.144	0.183	0.134	0.179	0.277
1159	15/04/2006	0.303	0.288	0.204	0.147	0.182	0.133	0.178	0.275
1759	15/04/2006	0.305	0.288	0.205	0.152	0.183	0.134	0.179	0.277
2359	15/04/2006	0.322	0.287	0.206	0.16	0.184	0.134	0.179	0.277
559	16/04/2006	0.333	0.287	0.205	0.174	0.185	0.135	0.179	0.277
1159	16/04/2006	0.293	0.285	0.203	0.182	0.184	0.134	0.179	0.275
1759	16/04/2006	0.294	0.288	0.205	0.185	0.186	0.135	0.179	0.279
2359	16/04/2006	0.319	0.287	0.204	0.186	0.186	0.135	0.179	0.277
559	17/04/2006	0.318	0.286	0.203	0.188	0.186	0.135	0.179	0.277
1159	17/04/2006	0.294	0.285	0.201	0.187	0.185	0.135	0.179	0.275
1759	17/04/2006	0.3	0.285	0.203	0.188	0.187	0.136	0.179	0.277
2359	17/04/2006	0.319	0.284	0.204	0.195	0.187	0.136	0.179	0.277
559	18/04/2006	0.313	0.284	0.203	0.2	0.188	0.136	0.179	0.277
1159	18/04/2006	0.281	0.283	0.202	0.201	0.187	0.136	0.179	0.276
1759	18/04/2006	0.286	0.282	0.204	0.202	0.189	0.137	0.18	0.278
2359	18/04/2006	0.308	0.281	0.204	0.204	0.189	0.137	0.18	0.277
559	19/04/2006	0.307	0.28	0.204	0.207	0.189	0.137	0.18	0.277
1159	19/04/2006	0.266	0.28	0.203	0.207	0.189	0.137	0.179	0.276
1759	19/04/2006	0.272	0.279	0.205	0.209	0.191	0.138	0.18	0.278
2359	19/04/2006	0.295	0.278	0.205	0.209	0.191	0.138	0.18	0.277
559	20/04/2006	0.295	0.278	0.204	0.21	0.191	0.138	0.18	0.277
1159	20/04/2006	0.272	0.277	0.203	0.209	0.191	0.137	0.18	0.276
1759	20/04/2006	0.274	0.276	0.205	0.211	0.193	0.138	0.18	0.277
2359	20/04/2006	0.295	0.275	0.205	0.211	0.193	0.139	0.18	0.278
559	21/04/2006	0.3	0.274	0.204	0.211	0.193	0.138	0.18	0.277
1159	21/04/2006	0.275	0.274	0.203	0.21	0.193	0.138	0.18	0.275
1759	21/04/2006	0.281	0.274	0.205	0.212	0.196	0.139	0.18	0.278
2359	21/04/2006	0.303	0.273	0.205	0.211	0.196	0.14	0.18	0.277
559	22/04/2006	0.316	0.273	0.204	0.211	0.197	0.14	0.18	0.276
1159	22/04/2006	0.316	0.274	0.203	0.21	0.197	0.14	0.18	0.276
1759	22/04/2006	0.295	0.276	0.203	0.21	0.199	0.14	0.181	0.276
2359	22/04/2006	0.31	0.276	0.204	0.211	0.2	0.141	0.181	0.277
559	23/04/2006	0.318	0.277	0.203	0.21	0.202	0.141	0.181	0.277
1159	23/04/2006	0.275	0.275	0.201	0.209	0.202	0.14	0.181	0.275
1759	23/04/2006	0.286	0.276	0.203	0.21	0.205	0.142	0.181	0.278
2359	23/04/2006	0.301	0.274	0.204	0.21	0.206	0.142	0.181	0.277
559	24/04/2006	0.305	0.275	0.204	0.21	0.208	0.142	0.181	0.277
1159	24/04/2006	0.27	0.275	0.203	0.209	0.208	0.142	0.181	0.276
1759	24/04/2006	0.267	0.274	0.204	0.21	0.211	0.143	0.182	0.278
2359	24/04/2006	0.283	0.273	0.205	0.211	0.214	0.144	0.182	0.278
559	25/04/2006	0.297	0.273	0.204	0.21	0.216	0.144	0.182	0.278

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	25/04/2006	0.265	0.272	0.202	0.209	0.22	0.143	0.182	0.275
1759	25/04/2006	0.26	0.271	0.204	0.21	0.232	0.145	0.182	0.278
2359	25/04/2006	0.282	0.27	0.205	0.211	0.24	0.145	0.183	0.278
559	26/04/2006	0.289	0.27	0.204	0.21	0.246	0.145	0.183	0.278
1159	26/04/2006	0.266	0.269	0.203	0.209	0.251	0.145	0.182	0.276
1759	26/04/2006	0.271	0.268	0.205	0.211	0.261	0.147	0.183	0.279
2359	26/04/2006	0.293	0.267	0.204	0.21	0.266	0.147	0.183	0.278
559	27/04/2006	0.293	0.266	0.203	0.209	0.267	0.147	0.183	0.276
1159	27/04/2006	0.278	0.266	0.203	0.209	0.268	0.147	0.183	0.276
1759	27/04/2006	0.276	0.264	0.202	0.208	0.268	0.148	0.184	0.276
2359	27/04/2006	0.296	0.264	0.204	0.21	0.269	0.149	0.184	0.278
559	28/04/2006	0.298	0.264	0.202	0.209	0.268	0.15	0.184	0.277
1159	28/04/2006	0.255	0.264	0.202	0.208	0.266	0.15	0.185	0.277
1759	28/04/2006	0.256	0.262	0.203	0.208	0.267	0.152	0.185	0.278
2359	28/04/2006	0.269	0.262	0.203	0.209	0.267	0.154	0.186	0.279
559	29/04/2006	0.268	0.26	0.202	0.207	0.264	0.156	0.186	0.276
1159	29/04/2006	0.257	0.26	0.202	0.207	0.263	0.16	0.186	0.277
1759	29/04/2006	0.268	0.259	0.202	0.207	0.263	0.166	0.187	0.277
2359	29/04/2006	0.273	0.258	0.202	0.206	0.262	0.171	0.188	0.277
559	30/04/2006	0.282	0.258	0.201	0.206	0.261	0.174	0.189	0.276
1159	30/04/2006	0.277	0.257	0.2	0.204	0.26	0.176	0.189	0.275
1759	30/04/2006	0.281	0.258	0.201	0.206	0.261	0.18	0.191	0.277
2359	30/04/2006	0.287	0.258	0.201	0.206	0.261	0.182	0.193	0.277
559	01/05/2006	0.29	0.258	0.201	0.205	0.26	0.184	0.197	0.277
1159	01/05/2006	0.282	0.257	0.199	0.203	0.258	0.185	0.201	0.275
1759	01/05/2006	0.291	0.258	0.2	0.204	0.26	0.188	0.208	0.277
2359	01/05/2006	0.38	0.261	0.2	0.204	0.259	0.189	0.217	0.276
559	02/05/2006	0.404	0.286	0.2	0.203	0.259	0.19	0.224	0.276
1159	02/05/2006	0.399	0.315	0.2	0.203	0.258	0.192	0.227	0.276
1759	02/05/2006	0.404	0.341	0.205	0.203	0.259	0.194	0.228	0.277
2359	02/05/2006	0.404	0.343	0.211	0.203	0.259	0.195	0.228	0.277
559	03/05/2006	0.41	0.338	0.213	0.203	0.259	0.196	0.228	0.277
1159	03/05/2006	0.368	0.339	0.213	0.203	0.258	0.197	0.228	0.276
1759	03/05/2006	0.371	0.328	0.214	0.204	0.259	0.198	0.229	0.277
2359	03/05/2006	0.367	0.322	0.215	0.205	0.259	0.199	0.229	0.277
559	04/05/2006	0.349	0.322	0.213	0.205	0.258	0.2	0.229	0.276
1159	04/05/2006	0.313	0.319	0.212	0.204	0.257	0.2	0.228	0.275
1759	04/05/2006	0.318	0.315	0.214	0.206	0.26	0.203	0.23	0.279
2359	04/05/2006	0.339	0.311	0.214	0.206	0.259	0.203	0.23	0.278
559	05/05/2006	0.353	0.309	0.212	0.205	0.258	0.203	0.229	0.276
1159	05/05/2006	0.303	0.307	0.21	0.204	0.257	0.202	0.228	0.275
1759	05/05/2006	0.292	0.303	0.212	0.206	0.26	0.205	0.23	0.278
2359	05/05/2006	0.316	0.3	0.213	0.207	0.26	0.206	0.23	0.278
559	06/05/2006	0.335	0.298	0.212	0.206	0.26	0.205	0.229	0.277
1159	06/05/2006	0.294	0.296	0.209	0.204	0.258	0.205	0.228	0.275
1759	06/05/2006	0.299	0.292	0.211	0.206	0.26	0.206	0.229	0.278
2359	06/05/2006	0.328	0.29	0.211	0.206	0.26	0.207	0.229	0.277
559	07/05/2006	0.336	0.289	0.21	0.206	0.26	0.207	0.229	0.277
1159	07/05/2006	0.294	0.288	0.209	0.205	0.26	0.207	0.229	0.277
1759	07/05/2006	0.306	0.283	0.209	0.205	0.261	0.208	0.229	0.277
2359	07/05/2006	0.326	0.281	0.209	0.206	0.261	0.208	0.229	0.277
559	08/05/2006	0.326	0.28	0.207	0.204	0.259	0.208	0.228	0.275
1159	08/05/2006	0.297	0.282	0.209	0.207	0.262	0.21	0.23	0.28
1759	08/05/2006	0.383	0.284	0.207	0.205	0.261	0.209	0.229	0.276
2359	08/05/2006	0.394	0.312	0.207	0.204	0.26	0.209	0.228	0.276
559	09/05/2006	0.39	0.32	0.209	0.204	0.26	0.209	0.228	0.276
1159	09/05/2006	0.38	0.321	0.211	0.204	0.26	0.209	0.228	0.275
1759	09/05/2006	0.379	0.322	0.213	0.204	0.26	0.21	0.229	0.276
2359	09/05/2006	0.374	0.322	0.214	0.204	0.26	0.21	0.229	0.276
559	10/05/2006	0.377	0.323	0.215	0.204	0.26	0.21	0.228	0.275
1159	10/05/2006	0.366	0.323	0.215	0.205	0.26	0.21	0.229	0.276
1759	10/05/2006	0.361	0.317	0.216	0.206	0.262	0.212	0.229	0.277
2359	10/05/2006	0.363	0.311	0.215	0.205	0.26	0.211	0.229	0.276
559	11/05/2006	0.356	0.311	0.214	0.204	0.259	0.21	0.228	0.274
1159	11/05/2006	0.342	0.312	0.214	0.206	0.261	0.212	0.229	0.277
1759	11/05/2006	0.351	0.304	0.214	0.206	0.261	0.212	0.229	0.276
2359	11/05/2006	0.349	0.3	0.214	0.206	0.261	0.212	0.229	0.276
559	12/05/2006	0.361	0.301	0.213	0.206	0.261	0.212	0.229	0.276
1159	12/05/2006	0.321	0.299	0.212	0.205	0.26	0.212	0.228	0.275
1759	12/05/2006	0.334	0.292	0.212	0.206	0.262	0.213	0.229	0.276
2359	12/05/2006	0.326	0.288	0.211	0.205	0.261	0.212	0.228	0.275
559	13/05/2006	0.319	0.288	0.21	0.205	0.261	0.212	0.228	0.275

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	13/05/2006	0.306	0.286	0.208	0.204	0.26	0.211	0.227	0.274
1759	13/05/2006	0.311	0.282	0.209	0.205	0.262	0.213	0.229	0.276
2359	13/05/2006	0.335	0.28	0.209	0.205	0.261	0.213	0.228	0.275
559	14/05/2006	0.341	0.28	0.208	0.205	0.261	0.213	0.228	0.275
1159	14/05/2006	0.32	0.278	0.206	0.203	0.26	0.212	0.227	0.273
1759	14/05/2006	0.332	0.274	0.205	0.203	0.26	0.212	0.227	0.273
2359	14/05/2006	0.319	0.276	0.207	0.204	0.262	0.213	0.228	0.275
559	15/05/2006	0.321	0.276	0.206	0.203	0.261	0.212	0.227	0.273
1159	15/05/2006	0.302	0.275	0.205	0.203	0.26	0.212	0.227	0.274
1759	15/05/2006	0.303	0.271	0.206	0.204	0.262	0.214	0.228	0.276
2359	15/05/2006	0.309	0.269	0.205	0.203	0.261	0.214	0.228	0.275
559	16/05/2006	0.323	0.268	0.204	0.202	0.26	0.212	0.227	0.273
1159	16/05/2006	0.299	0.267	0.204	0.202	0.261	0.213	0.227	0.274
1759	16/05/2006	0.292	0.261	0.203	0.202	0.26	0.213	0.227	0.273
2359	16/05/2006	0.3	0.261	0.204	0.203	0.262	0.214	0.228	0.275
559	17/05/2006	0.29	0.261	0.203	0.203	0.261	0.214	0.227	0.274
1159	17/05/2006	0.274	0.259	0.201	0.201	0.26	0.213	0.226	0.273
1759	17/05/2006	0.263	0.255	0.201	0.202	0.261	0.214	0.227	0.274
2359	17/05/2006	0.277	0.254	0.202	0.202	0.262	0.214	0.228	0.275
559	18/05/2006	0.293	0.253	0.2	0.2	0.26	0.212	0.226	0.272
1159	18/05/2006	0.276	0.252	0.199	0.2	0.26	0.213	0.226	0.273
1759	18/05/2006	0.275	0.248	0.2	0.201	0.261	0.214	0.227	0.275
2359	18/05/2006	0.278	0.247	0.199	0.201	0.261	0.215	0.227	0.275
559	19/05/2006	0.281	0.247	0.199	0.2	0.26	0.214	0.226	0.273
1159	19/05/2006	0.281	0.246	0.198	0.2	0.26	0.214	0.226	0.273
1759	19/05/2006	0.284	0.243	0.197	0.2	0.261	0.214	0.227	0.274
2359	19/05/2006	0.277	0.242	0.197	0.199	0.261	0.214	0.227	0.273
559	20/05/2006	0.275	0.242	0.196	0.198	0.259	0.213	0.226	0.272
1159	20/05/2006	0.267	0.241	0.196	0.198	0.26	0.213	0.226	0.273
1759	20/05/2006	0.269	0.24	0.195	0.198	0.26	0.214	0.226	0.273
2359	20/05/2006	0.264	0.239	0.195	0.198	0.259	0.214	0.226	0.272
559	21/05/2006	0.267	0.239	0.195	0.198	0.259	0.214	0.226	0.272
1159	21/05/2006	0.312	0.239	0.194	0.197	0.258	0.213	0.225	0.272
1759	21/05/2006	0.305	0.241	0.193	0.196	0.257	0.212	0.225	0.271
2359	21/05/2006	0.303	0.244	0.195	0.198	0.259	0.214	0.226	0.273
559	22/05/2006	0.298	0.247	0.195	0.197	0.259	0.214	0.226	0.273
1159	22/05/2006	0.298	0.248	0.194	0.196	0.258	0.213	0.225	0.272
1759	22/05/2006	0.3	0.247	0.195	0.197	0.259	0.215	0.227	0.274
2359	22/05/2006	0.306	0.248	0.195	0.197	0.259	0.215	0.227	0.274
559	23/05/2006	0.309	0.248	0.195	0.196	0.258	0.214	0.226	0.272
1159	23/05/2006	0.305	0.248	0.194	0.195	0.257	0.213	0.225	0.271
1759	23/05/2006	0.304	0.246	0.194	0.195	0.258	0.214	0.226	0.273
2359	23/05/2006	0.298	0.247	0.194	0.195	0.258	0.214	0.226	0.273
559	24/05/2006	0.301	0.247	0.194	0.195	0.258	0.214	0.226	0.272
1159	24/05/2006	0.299	0.247	0.194	0.195	0.257	0.214	0.225	0.272
1759	24/05/2006	0.31	0.248	0.194	0.195	0.258	0.214	0.225	0.272
2359	24/05/2006	0.309	0.248	0.194	0.195	0.257	0.214	0.225	0.271
559	25/05/2006	0.307	0.249	0.194	0.195	0.257	0.213	0.225	0.271
1159	25/05/2006	0.304	0.25	0.194	0.194	0.257	0.213	0.225	0.271
1759	25/05/2006	0.307	0.251	0.194	0.195	0.257	0.214	0.226	0.272
2359	25/05/2006	0.305	0.251	0.194	0.195	0.257	0.214	0.226	0.272
559	26/05/2006	0.303	0.251	0.194	0.194	0.257	0.213	0.225	0.271
1159	26/05/2006	0.297	0.251	0.193	0.193	0.256	0.213	0.225	0.27
1759	26/05/2006	0.321	0.251	0.194	0.194	0.257	0.214	0.226	0.272
2359	26/05/2006	0.316	0.251	0.194	0.194	0.256	0.214	0.226	0.272
559	27/05/2006	0.308	0.251	0.192	0.192	0.254	0.211	0.224	0.268
1159	27/05/2006	0.305	0.251	0.193	0.193	0.255	0.213	0.225	0.271
1759	27/05/2006	0.326	0.249	0.194	0.193	0.256	0.214	0.226	0.272
2359	27/05/2006	0.317	0.249	0.194	0.193	0.256	0.214	0.226	0.272
559	28/05/2006	0.304	0.249	0.193	0.192	0.254	0.212	0.224	0.27
1159	28/05/2006	0.282	0.248	0.192	0.191	0.254	0.212	0.225	0.27
1759	28/05/2006	0.291	0.245	0.192	0.19	0.254	0.212	0.225	0.27
2359	28/05/2006	0.293	0.245	0.193	0.191	0.255	0.213	0.226	0.272
559	29/05/2006	0.294	0.246	0.192	0.191	0.254	0.213	0.225	0.271
1159	29/05/2006	0.278	0.245	0.191	0.19	0.254	0.213	0.225	0.271
1759	29/05/2006	0.29	0.242	0.191	0.19	0.255	0.213	0.226	0.272
2359	29/05/2006	0.289	0.242	0.191	0.189	0.254	0.213	0.225	0.271
559	30/05/2006	0.282	0.241	0.19	0.188	0.253	0.212	0.224	0.27
1159	30/05/2006	0.278	0.24	0.19	0.188	0.253	0.212	0.225	0.27
1759	30/05/2006	0.281	0.239	0.189	0.187	0.253	0.212	0.225	0.271
2359	30/05/2006	0.276	0.238	0.189	0.187	0.253	0.212	0.225	0.271
559	31/05/2006	0.269	0.237	0.187	0.185	0.25	0.21	0.223	0.268

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	31/05/2006	0.261	0.237	0.188	0.185	0.251	0.211	0.224	0.27
1759	31/05/2006	0.265	0.234	0.187	0.184	0.252	0.212	0.225	0.271
2359	31/05/2006	0.258	0.234	0.187	0.184	0.251	0.212	0.225	0.271
559	01/06/2006	0.256	0.233	0.186	0.182	0.249	0.209	0.223	0.268
1159	01/06/2006	0.246	0.231	0.185	0.182	0.249	0.21	0.224	0.269
1759	01/06/2006	0.241	0.228	0.184	0.181	0.249	0.21	0.224	0.27
2359	01/06/2006	0.245	0.228	0.185	0.181	0.25	0.211	0.225	0.271
559	02/06/2006	0.245	0.227	0.183	0.179	0.247	0.208	0.223	0.268
1159	02/06/2006	0.235	0.225	0.182	0.179	0.248	0.209	0.224	0.269
1759	02/06/2006	0.232	0.223	0.182	0.178	0.248	0.21	0.225	0.271
2359	02/06/2006	0.235	0.222	0.182	0.178	0.248	0.21	0.225	0.271
559	03/06/2006	0.236	0.222	0.181	0.177	0.247	0.209	0.224	0.269
1159	03/06/2006	0.24	0.222	0.182	0.178	0.248	0.21	0.225	0.272
1759	03/06/2006	0.239	0.22	0.18	0.176	0.246	0.208	0.224	0.27
2359	03/06/2006	0.237	0.219	0.179	0.175	0.245	0.207	0.224	0.269
559	04/06/2006	0.23	0.219	0.178	0.174	0.243	0.206	0.223	0.268
1159	04/06/2006	0.231	0.218	0.177	0.173	0.243	0.206	0.223	0.269
1759	04/06/2006	0.234	0.216	0.176	0.172	0.242	0.207	0.224	0.27
2359	04/06/2006	0.232	0.215	0.176	0.172	0.242	0.206	0.224	0.27
559	05/06/2006	0.23	0.214	0.174	0.17	0.239	0.204	0.222	0.267
1159	05/06/2006	0.227	0.214	0.175	0.17	0.24	0.205	0.223	0.269
1759	05/06/2006	0.231	0.213	0.175	0.171	0.241	0.207	0.225	0.272
2359	05/06/2006	0.233	0.212	0.174	0.169	0.239	0.205	0.224	0.27
559	06/06/2006	0.232	0.21	0.171	0.167	0.235	0.202	0.222	0.266
1159	06/06/2006	0.228	0.211	0.172	0.168	0.237	0.203	0.223	0.268
1759	06/06/2006	0.233	0.21	0.172	0.168	0.236	0.203	0.223	0.269
2359	06/06/2006	0.227	0.209	0.172	0.167	0.235	0.202	0.223	0.269
559	07/06/2006	0.226	0.209	0.171	0.167	0.234	0.201	0.222	0.268
1159	07/06/2006	0.223	0.208	0.169	0.166	0.232	0.2	0.222	0.267
1759	07/06/2006	0.227	0.208	0.169	0.165	0.231	0.199	0.222	0.267
2359	07/06/2006	0.224	0.208	0.17	0.166	0.232	0.201	0.224	0.27
559	08/06/2006	0.219	0.207	0.168	0.165	0.23	0.199	0.222	0.267
1159	08/06/2006	0.219	0.207	0.168	0.165	0.23	0.199	0.223	0.269
1759	08/06/2006	0.223	0.205	0.167	0.164	0.228	0.199	0.223	0.269
2359	08/06/2006	0.22	0.205	0.167	0.164	0.227	0.198	0.223	0.269
559	09/06/2006	0.219	0.204	0.167	0.163	0.227	0.197	0.223	0.268
1159	09/06/2006	0.22	0.204	0.167	0.163	0.227	0.196	0.223	0.268
1759	09/06/2006	0.222	0.204	0.166	0.163	0.226	0.195	0.222	0.267
2359	09/06/2006	0.218	0.203	0.166	0.163	0.226	0.195	0.223	0.268
559	10/06/2006	0.216	0.203	0.166	0.163	0.226	0.195	0.222	0.267
1159	10/06/2006	0.216	0.203	0.166	0.163	0.226	0.194	0.222	0.268
1759	10/06/2006	0.22	0.203	0.166	0.163	0.226	0.194	0.223	0.268
2359	10/06/2006	0.218	0.203	0.166	0.162	0.225	0.193	0.223	0.268
559	11/06/2006	0.217	0.202	0.165	0.162	0.225	0.192	0.222	0.267
1159	11/06/2006	0.216	0.202	0.164	0.161	0.223	0.191	0.221	0.266
1759	11/06/2006	0.221	0.202	0.164	0.161	0.222	0.191	0.222	0.266
2359	11/06/2006	0.218	0.202	0.164	0.161	0.223	0.191	0.222	0.267
559	12/06/2006	0.217	0.201	0.164	0.161	0.223	0.19	0.222	0.267
1159	12/06/2006	0.215	0.201	0.163	0.16	0.222	0.189	0.222	0.266
1759	12/06/2006	0.224	0.201	0.164	0.16	0.221	0.19	0.223	0.268
2359	12/06/2006	0.218	0.2	0.164	0.16	0.22	0.189	0.223	0.268
559	13/06/2006	0.213	0.199	0.162	0.158	0.218	0.186	0.221	0.265
1159	13/06/2006	0.212	0.198	0.161	0.158	0.217	0.186	0.221	0.266
1759	13/06/2006	0.214	0.198	0.161	0.158	0.217	0.187	0.222	0.268
2359	13/06/2006	0.212	0.197	0.161	0.158	0.217	0.186	0.222	0.268
559	14/06/2006	0.209	0.197	0.16	0.157	0.215	0.184	0.221	0.266
1159	14/06/2006	0.206	0.196	0.159	0.156	0.214	0.183	0.221	0.266
1759	14/06/2006	0.209	0.195	0.158	0.155	0.213	0.183	0.222	0.267
2359	14/06/2006	0.208	0.194	0.158	0.155	0.213	0.183	0.222	0.268
559	15/06/2006	0.207	0.193	0.157	0.153	0.211	0.181	0.221	0.265
1159	15/06/2006	0.203	0.192	0.156	0.153	0.211	0.18	0.221	0.266
1759	15/06/2006	0.206	0.191	0.155	0.151	0.209	0.179	0.221	0.266
2359	15/06/2006	0.205	0.191	0.155	0.152	0.21	0.18	0.222	0.268
559	16/06/2006	0.204	0.19	0.154	0.151	0.209	0.178	0.221	0.266
1159	16/06/2006	0.201	0.189	0.153	0.15	0.207	0.177	0.221	0.266
1759	16/06/2006	0.205	0.188	0.152	0.148	0.206	0.176	0.221	0.266
2359	16/06/2006	0.207	0.188	0.153	0.149	0.207	0.177	0.222	0.268
559	17/06/2006	0.203	0.187	0.151	0.148	0.205	0.174	0.22	0.265
1159	17/06/2006	0.202	0.187	0.151	0.148	0.205	0.175	0.221	0.267
1759	17/06/2006	0.204	0.187	0.151	0.147	0.205	0.175	0.221	0.268
2359	17/06/2006	0.206	0.2	0.178	0.19	0.272	0.197	0.233	0.266
559	18/06/2006	0.204	0.2	0.175	0.187	0.266	0.199	0.234	0.265

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	18/06/2006	0.206	0.199	0.173	0.184	0.262	0.2	0.234	0.264
1759	18/06/2006	0.211	0.2	0.174	0.184	0.264	0.204	0.237	0.268
2359	18/06/2006	0.209	0.199	0.173	0.182	0.261	0.203	0.235	0.266
559	19/06/2006	0.208	0.199	0.172	0.181	0.259	0.203	0.235	0.266
1159	19/06/2006	0.214	0.205	0.183	0.192	0.26	0.203	0.234	0.265
1759	19/06/2006	0.227	0.206	0.179	0.188	0.259	0.202	0.233	0.264
2359	19/06/2006	0.237	0.207	0.18	0.188	0.261	0.204	0.234	0.267
559	20/06/2006	0.238	0.206	0.177	0.185	0.257	0.202	0.232	0.263
1159	20/06/2006	0.236	0.206	0.177	0.184	0.256	0.203	0.232	0.264
1759	20/06/2006	0.254	0.208	0.18	0.187	0.261	0.208	0.237	0.271
2359	20/06/2006	0.257	0.207	0.177	0.183	0.256	0.204	0.233	0.266
559	21/06/2006	0.27	0.208	0.177	0.182	0.255	0.204	0.232	0.265
1159	21/06/2006	0.278	0.208	0.177	0.181	0.254	0.203	0.231	0.265
1759	21/06/2006	0.286	0.209	0.177	0.181	0.255	0.204	0.232	0.266
2359	21/06/2006	0.288	0.209	0.177	0.18	0.254	0.204	0.231	0.265
559	22/06/2006	0.294	0.209	0.177	0.179	0.253	0.203	0.231	0.265
1159	22/06/2006	0.276	0.21	0.176	0.178	0.251	0.203	0.23	0.264
1759	22/06/2006	0.275	0.21	0.176	0.178	0.25	0.203	0.23	0.265
2359	22/06/2006	0.285	0.21	0.177	0.178	0.25	0.203	0.23	0.265
559	23/06/2006	0.279	0.209	0.174	0.175	0.247	0.201	0.229	0.263
1159	23/06/2006	0.265	0.209	0.174	0.175	0.247	0.201	0.229	0.264
1759	23/06/2006	0.265	0.209	0.174	0.174	0.246	0.201	0.228	0.264
2359	23/06/2006	0.282	0.209	0.175	0.175	0.247	0.202	0.229	0.266
559	24/06/2006	0.27	0.208	0.172	0.172	0.244	0.199	0.227	0.262
1159	24/06/2006	0.255	0.209	0.173	0.172	0.244	0.199	0.228	0.263
1759	24/06/2006	0.255	0.208	0.173	0.173	0.244	0.2	0.229	0.265
2359	24/06/2006	0.257	0.208	0.173	0.173	0.243	0.199	0.228	0.265
559	25/06/2006	0.256	0.208	0.172	0.171	0.241	0.198	0.227	0.263
1159	25/06/2006	0.253	0.207	0.172	0.171	0.241	0.198	0.227	0.264
1759	25/06/2006	0.257	0.207	0.171	0.17	0.24	0.197	0.227	0.264
2359	25/06/2006	0.258	0.207	0.172	0.171	0.24	0.198	0.228	0.266
559	26/06/2006	0.256	0.206	0.17	0.168	0.237	0.195	0.225	0.262
1159	26/06/2006	0.245	0.206	0.169	0.168	0.236	0.194	0.226	0.263
1759	26/06/2006	0.243	0.205	0.169	0.168	0.236	0.194	0.226	0.264
2359	26/06/2006	0.244	0.205	0.17	0.168	0.236	0.195	0.227	0.265
559	27/06/2006	0.24	0.205	0.168	0.167	0.234	0.193	0.225	0.263
1159	27/06/2006	0.231	0.204	0.167	0.165	0.232	0.191	0.224	0.262
1759	27/06/2006	0.226	0.203	0.167	0.165	0.232	0.191	0.225	0.263
2359	27/06/2006	0.23	0.202	0.167	0.165	0.232	0.191	0.226	0.265
559	28/06/2006	0.231	0.202	0.165	0.163	0.229	0.188	0.224	0.261
1159	28/06/2006	0.228	0.201	0.165	0.163	0.228	0.188	0.223	0.261
1759	28/06/2006	0.233	0.201	0.166	0.164	0.23	0.189	0.225	0.265
2359	28/06/2006	0.235	0.201	0.166	0.164	0.23	0.189	0.225	0.265
559	29/06/2006	0.229	0.2	0.165	0.162	0.228	0.187	0.224	0.263
1159	29/06/2006	0.227	0.199	0.164	0.161	0.226	0.186	0.223	0.262
1759	29/06/2006	0.233	0.199	0.164	0.161	0.226	0.186	0.224	0.263
2359	29/06/2006	0.231	0.198	0.164	0.161	0.226	0.186	0.224	0.264
559	30/06/2006	0.225	0.197	0.162	0.159	0.223	0.184	0.222	0.261
1159	30/06/2006	0.222	0.197	0.161	0.159	0.222	0.183	0.222	0.261
1759	30/06/2006	0.226	0.197	0.162	0.16	0.224	0.184	0.224	0.264
2359	30/06/2006	0.225	0.196	0.162	0.16	0.224	0.184	0.224	0.265
559	01/07/2006	0.222	0.196	0.16	0.159	0.221	0.182	0.222	0.263
1159	01/07/2006	0.218	0.195	0.159	0.157	0.219	0.181	0.221	0.261
1759	01/07/2006	0.226	0.195	0.16	0.158	0.221	0.182	0.223	0.264
2359	01/07/2006	0.224	0.195	0.159	0.158	0.221	0.182	0.223	0.264
559	02/07/2006	0.22	0.194	0.157	0.156	0.217	0.179	0.22	0.26
1159	02/07/2006	0.221	0.193	0.157	0.156	0.218	0.18	0.221	0.262
1759	02/07/2006	0.23	0.194	0.158	0.156	0.218	0.18	0.222	0.263
2359	02/07/2006	0.219	0.193	0.158	0.156	0.218	0.18	0.222	0.263
559	03/07/2006	0.218	0.192	0.156	0.154	0.214	0.177	0.22	0.26
1159	03/07/2006	0.216	0.192	0.156	0.155	0.215	0.178	0.221	0.261
1759	03/07/2006	0.218	0.193	0.157	0.155	0.216	0.179	0.222	0.263
2359	03/07/2006	0.213	0.192	0.157	0.155	0.216	0.178	0.222	0.263
559	04/07/2006	0.211	0.191	0.155	0.154	0.214	0.177	0.221	0.261
1159	04/07/2006	0.21	0.19	0.154	0.152	0.212	0.175	0.22	0.26
1759	04/07/2006	0.219	0.199	0.17	0.169	0.236	0.196	0.241	0.306
2359	04/07/2006	0.213	0.197	0.171	0.169	0.235	0.195	0.24	0.306
559	05/07/2006	0.208	0.195	0.17	0.17	0.236	0.195	0.24	0.306
1159	05/07/2006	0.21	0.195	0.169	0.169	0.236	0.195	0.24	0.306
1759	05/07/2006	0.215	0.197	0.169	0.168	0.235	0.194	0.24	0.306
2359	05/07/2006	0.209	0.195	0.17	0.168	0.234	0.194	0.24	0.306
559	06/07/2006	0.205	0.193	0.168	0.168	0.234	0.194	0.24	0.306

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	06/07/2006	0.209	0.193	0.167	0.168	0.234	0.194	0.24	0.306
1759	06/07/2006	0.211	0.195	0.168	0.167	0.233	0.194	0.24	0.306
2359	06/07/2006	0.207	0.194	0.168	0.167	0.233	0.194	0.24	0.306
559	07/07/2006	0.205	0.193	0.167	0.167	0.233	0.194	0.24	0.306
1159	07/07/2006	0.206	0.192	0.166	0.166	0.232	0.193	0.239	0.307
1759	07/07/2006	0.205	0.192	0.166	0.166	0.232	0.193	0.239	0.307
2359	07/07/2006	0.204	0.191	0.165	0.165	0.231	0.193	0.239	0.307
559	08/07/2006	0.203	0.19	0.164	0.165	0.231	0.193	0.239	0.307
1159	08/07/2006	0.204	0.19	0.164	0.164	0.231	0.193	0.239	0.307
1759	08/07/2006	0.207	0.191	0.164	0.164	0.23	0.192	0.239	0.307
2359	08/07/2006	0.206	0.191	0.164	0.163	0.23	0.192	0.238	0.307
559	09/07/2006	0.203	0.19	0.163	0.164	0.23	0.192	0.238	0.307
1159	09/07/2006	0.206	0.19	0.163	0.163	0.229	0.192	0.238	0.307
1759	09/07/2006	0.212	0.193	0.164	0.162	0.229	0.191	0.238	0.307
2359	09/07/2006	0.208	0.192	0.165	0.163	0.228	0.191	0.237	0.307
559	10/07/2006	0.204	0.191	0.164	0.163	0.228	0.191	0.237	0.308
1159	10/07/2006	0.208	0.191	0.163	0.162	0.228	0.19	0.237	0.308
1759	10/07/2006	0.208	0.191	0.163	0.162	0.228	0.19	0.237	0.308
2359	10/07/2006	0.207	0.192	0.177	0.162	0.228	0.19	0.237	0.308
559	11/07/2006	0.313	0.231	0.191	0.2	0.269	0.192	0.237	0.308
1159	11/07/2006	0.348	0.249	0.19	0.201	0.276	0.197	0.241	0.308
1759	11/07/2006	0.339	0.257	0.189	0.198	0.276	0.201	0.245	0.343
2359	11/07/2006	0.331	0.261	0.189	0.197	0.274	0.202	0.246	0.396
559	12/07/2006	0.324	0.263	0.188	0.197	0.274	0.204	0.247	0.399
1159	12/07/2006	0.33	0.266	0.188	0.196	0.273	0.205	0.247	0.4
1759	12/07/2006	0.337	0.272	0.189	0.194	0.272	0.206	0.247	0.4
2359	12/07/2006	0.323	0.272	0.19	0.194	0.271	0.206	0.246	0.399
559	13/07/2006	0.317	0.27	0.19	0.194	0.272	0.207	0.246	0.399
1159	13/07/2006	0.328	0.272	0.189	0.194	0.271	0.207	0.246	0.398
1759	13/07/2006	0.329	0.275	0.19	0.193	0.27	0.207	0.245	0.397
2359	13/07/2006	0.326	0.275	0.191	0.193	0.269	0.207	0.245	0.396
559	14/07/2006	0.319	0.275	0.191	0.193	0.27	0.208	0.245	0.395
1159	14/07/2006	0.326	0.277	0.191	0.192	0.27	0.209	0.245	0.395
1759	14/07/2006	0.336	0.282	0.192	0.191	0.269	0.208	0.244	0.395
2359	14/07/2006	0.317	0.279	0.192	0.192	0.269	0.208	0.244	0.394
559	15/07/2006	0.31	0.276	0.192	0.192	0.269	0.209	0.244	0.393
1159	15/07/2006	0.32	0.276	0.191	0.191	0.269	0.209	0.244	0.393
1759	15/07/2006	0.331	0.281	0.192	0.19	0.268	0.209	0.243	0.392
2359	15/07/2006	0.32	0.28	0.194	0.191	0.268	0.209	0.243	0.391
559	16/07/2006	0.313	0.278	0.193	0.191	0.269	0.21	0.243	0.39
1159	16/07/2006	0.319	0.278	0.192	0.191	0.269	0.211	0.243	0.39
1759	16/07/2006	0.328	0.282	0.193	0.19	0.268	0.21	0.243	0.389
2359	16/07/2006	0.317	0.281	0.194	0.19	0.267	0.21	0.242	0.389
559	17/07/2006	0.307	0.277	0.194	0.19	0.268	0.211	0.242	0.389
1159	17/07/2006	0.313	0.277	0.193	0.19	0.268	0.211	0.242	0.388
1759	17/07/2006	0.325	0.282	0.194	0.189	0.267	0.211	0.242	0.388
2359	17/07/2006	0.311	0.279	0.196	0.189	0.267	0.211	0.242	0.387
559	18/07/2006	0.3	0.274	0.195	0.19	0.268	0.211	0.241	0.386
1159	18/07/2006	0.31	0.272	0.194	0.189	0.267	0.211	0.241	0.386
1759	18/07/2006	0.308	0.274	0.195	0.189	0.267	0.212	0.241	0.385
2359	18/07/2006	0.302	0.272	0.195	0.189	0.267	0.212	0.241	0.385
559	19/07/2006	0.296	0.269	0.195	0.189	0.268	0.212	0.241	0.384
1159	19/07/2006	0.305	0.269	0.194	0.189	0.267	0.213	0.241	0.384
1759	19/07/2006	0.321	0.275	0.195	0.188	0.267	0.212	0.241	0.383
2359	19/07/2006	0.305	0.272	0.197	0.188	0.266	0.212	0.24	0.382
559	20/07/2006	0.295	0.268	0.196	0.189	0.267	0.213	0.24	0.382
1159	20/07/2006	0.3	0.266	0.196	0.189	0.267	0.213	0.241	0.381
1759	20/07/2006	0.312	0.271	0.197	0.188	0.266	0.213	0.241	0.381
2359	20/07/2006	0.298	0.269	0.198	0.189	0.266	0.213	0.24	0.38
559	21/07/2006	0.287	0.264	0.197	0.19	0.267	0.213	0.24	0.38
1159	21/07/2006	0.291	0.263	0.196	0.189	0.267	0.213	0.24	0.379
1759	21/07/2006	0.298	0.266	0.197	0.188	0.267	0.213	0.24	0.379
2359	21/07/2006	0.286	0.264	0.198	0.189	0.266	0.213	0.24	0.378
559	22/07/2006	0.277	0.259	0.197	0.189	0.267	0.213	0.239	0.377
1159	22/07/2006	0.282	0.258	0.196	0.189	0.267	0.214	0.24	0.377
1759	22/07/2006	0.288	0.262	0.198	0.188	0.267	0.214	0.24	0.376
2359	22/07/2006	0.275	0.259	0.199	0.189	0.267	0.214	0.24	0.376
559	23/07/2006	0.267	0.255	0.198	0.189	0.267	0.214	0.239	0.375
1159	23/07/2006	0.266	0.253	0.197	0.189	0.267	0.214	0.24	0.374
1759	23/07/2006	0.275	0.255	0.197	0.188	0.267	0.215	0.24	0.374
2359	23/07/2006	0.267	0.254	0.198	0.188	0.267	0.214	0.239	0.374
559	24/07/2006	0.261	0.251	0.197	0.189	0.267	0.215	0.239	0.373

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	24/07/2006	0.259	0.249	0.196	0.189	0.268	0.215	0.24	0.373
1759	24/07/2006	0.272	0.25	0.196	0.188	0.267	0.215	0.239	0.372
2359	24/07/2006	0.263	0.249	0.197	0.188	0.267	0.215	0.239	0.372
559	25/07/2006	0.257	0.246	0.196	0.188	0.268	0.215	0.239	0.371
1159	25/07/2006	0.258	0.245	0.195	0.188	0.267	0.215	0.239	0.371
1759	25/07/2006	0.266	0.246	0.195	0.187	0.267	0.215	0.239	0.37
2359	25/07/2006	0.259	0.245	0.196	0.187	0.267	0.215	0.239	0.37
559	26/07/2006	0.254	0.242	0.194	0.187	0.267	0.215	0.239	0.37
1159	26/07/2006	0.254	0.241	0.193	0.187	0.266	0.215	0.239	0.369
1759	26/07/2006	0.255	0.241	0.193	0.186	0.266	0.215	0.238	0.369
2359	26/07/2006	0.254	0.24	0.193	0.186	0.266	0.215	0.238	0.369
559	27/07/2006	0.254	0.239	0.192	0.186	0.265	0.215	0.238	0.368
1159	27/07/2006	0.262	0.239	0.192	0.185	0.265	0.215	0.238	0.368
1759	27/07/2006	0.273	0.242	0.192	0.185	0.264	0.215	0.238	0.367
2359	27/07/2006	0.264	0.241	0.193	0.185	0.263	0.214	0.237	0.367
559	28/07/2006	0.258	0.239	0.192	0.186	0.264	0.215	0.237	0.366
1159	28/07/2006	0.264	0.239	0.192	0.185	0.264	0.215	0.238	0.366
1759	28/07/2006	0.275	0.242	0.192	0.185	0.263	0.214	0.237	0.366
2359	28/07/2006	0.267	0.242	0.194	0.185	0.263	0.214	0.237	0.366
559	29/07/2006	0.261	0.24	0.193	0.185	0.263	0.214	0.237	0.365
1159	29/07/2006	0.261	0.239	0.192	0.185	0.263	0.214	0.237	0.365
1759	29/07/2006	0.264	0.24	0.192	0.185	0.263	0.214	0.236	0.365
2359	29/07/2006	0.26	0.239	0.192	0.185	0.263	0.214	0.236	0.364
559	30/07/2006	0.257	0.238	0.191	0.184	0.262	0.214	0.236	0.364
1159	30/07/2006	0.259	0.238	0.191	0.184	0.262	0.214	0.236	0.363
1759	30/07/2006	0.265	0.238	0.19	0.183	0.262	0.214	0.236	0.363
2359	30/07/2006	0.285	0.238	0.19	0.183	0.261	0.214	0.236	0.363
559	31/07/2006	0.288	0.238	0.19	0.184	0.262	0.214	0.236	0.362
1159	31/07/2006	0.297	0.239	0.189	0.183	0.261	0.214	0.235	0.362
1759	31/07/2006	0.334	0.241	0.189	0.182	0.261	0.213	0.235	0.362
2359	31/07/2006	0.371	0.246	0.189	0.182	0.26	0.213	0.235	0.362
559	01/08/2006	0.355	0.252	0.189	0.183	0.26	0.213	0.235	0.361
1159	01/08/2006	0.361	0.259	0.189	0.182	0.26	0.214	0.235	0.361
1759	01/08/2006	0.37	0.268	0.19	0.181	0.259	0.213	0.234	0.36
2359	01/08/2006	0.347	0.271	0.192	0.182	0.259	0.212	0.234	0.36
559	02/08/2006	0.334	0.27	0.191	0.183	0.259	0.213	0.234	0.36
1159	02/08/2006	0.34	0.271	0.191	0.182	0.26	0.213	0.234	0.359
1759	02/08/2006	0.359	0.278	0.192	0.182	0.259	0.212	0.233	0.359
2359	02/08/2006	0.339	0.278	0.194	0.182	0.258	0.212	0.233	0.359
559	03/08/2006	0.328	0.275	0.194	0.183	0.259	0.212	0.233	0.358
1159	03/08/2006	0.335	0.274	0.193	0.183	0.259	0.212	0.233	0.358
1759	03/08/2006	0.341	0.278	0.194	0.182	0.258	0.212	0.233	0.357
2359	03/08/2006	0.328	0.276	0.195	0.183	0.258	0.212	0.233	0.358
559	04/08/2006	0.328	0.275	0.194	0.184	0.259	0.212	0.233	0.357
1159	04/08/2006	0.343	0.277	0.194	0.183	0.259	0.212	0.233	0.357
1759	04/08/2006	0.351	0.281	0.195	0.183	0.258	0.212	0.233	0.357
2359	04/08/2006	0.336	0.281	0.196	0.183	0.258	0.212	0.232	0.356
559	05/08/2006	0.325	0.278	0.196	0.184	0.258	0.212	0.232	0.356
1159	05/08/2006	0.336	0.278	0.195	0.184	0.258	0.212	0.232	0.355
1759	05/08/2006	0.346	0.283	0.197	0.184	0.258	0.212	0.232	0.355
2359	05/08/2006	0.33	0.282	0.198	0.184	0.258	0.212	0.232	0.355
559	06/08/2006	0.32	0.278	0.197	0.185	0.259	0.212	0.232	0.354
1159	06/08/2006	0.328	0.277	0.197	0.185	0.259	0.212	0.232	0.354
1759	06/08/2006	0.337	0.281	0.198	0.184	0.258	0.212	0.232	0.354
2359	06/08/2006	0.324	0.281	0.199	0.185	0.258	0.212	0.232	0.354
559	07/08/2006	0.316	0.277	0.198	0.186	0.259	0.212	0.232	0.354
1159	07/08/2006	0.323	0.276	0.198	0.186	0.259	0.213	0.232	0.353
1759	07/08/2006	0.337	0.282	0.199	0.185	0.259	0.212	0.232	0.353
2359	07/08/2006	0.321	0.28	0.201	0.186	0.259	0.212	0.232	0.353
559	08/08/2006	0.314	0.277	0.2	0.187	0.259	0.212	0.232	0.352
1159	08/08/2006	0.32	0.276	0.2	0.187	0.26	0.213	0.232	0.352
1759	08/08/2006	0.325	0.279	0.2	0.186	0.26	0.213	0.232	0.352
2359	08/08/2006	0.318	0.278	0.201	0.187	0.26	0.213	0.232	0.351
559	09/08/2006	0.315	0.276	0.2	0.188	0.26	0.213	0.232	0.351
1159	09/08/2006	0.323	0.277	0.2	0.187	0.26	0.213	0.232	0.351
1759	09/08/2006	0.328	0.281	0.201	0.187	0.26	0.213	0.232	0.35
2359	09/08/2006	0.317	0.279	0.201	0.187	0.26	0.213	0.232	0.35
559	10/08/2006	0.307	0.275	0.2	0.188	0.261	0.214	0.232	0.35
1159	10/08/2006	0.311	0.273	0.199	0.188	0.261	0.214	0.232	0.35
1759	10/08/2006	0.323	0.277	0.2	0.187	0.26	0.213	0.232	0.35
2359	10/08/2006	0.311	0.276	0.201	0.187	0.26	0.213	0.232	0.349
559	11/08/2006	0.3	0.272	0.2	0.188	0.261	0.214	0.232	0.349



MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	11/08/2006	0.303	0.27	0.199	0.188	0.261	0.214	0.232	0.349
1759	11/08/2006	0.309	0.271	0.199	0.187	0.261	0.214	0.232	0.349
2359	11/08/2006	0.304	0.271	0.199	0.187	0.26	0.214	0.231	0.348
559	12/08/2006	0.299	0.269	0.198	0.188	0.261	0.214	0.232	0.348
1159	12/08/2006	0.304	0.268	0.198	0.187	0.261	0.214	0.232	0.348
1759	12/08/2006	0.313	0.272	0.199	0.187	0.26	0.214	0.232	0.347
2359	12/08/2006	0.301	0.27	0.2	0.187	0.26	0.213	0.231	0.347
559	13/08/2006	0.293	0.267	0.199	0.188	0.261	0.214	0.231	0.347
1159	13/08/2006	0.297	0.266	0.198	0.187	0.26	0.214	0.232	0.347
1759	13/08/2006	0.312	0.27	0.199	0.187	0.26	0.213	0.231	0.347
2359	13/08/2006	0.299	0.269	0.2	0.187	0.26	0.213	0.231	0.346
559	14/08/2006	0.291	0.266	0.2	0.188	0.261	0.214	0.231	0.346
1159	14/08/2006	0.294	0.264	0.199	0.188	0.261	0.214	0.232	0.346
1759	14/08/2006	0.3	0.267	0.2	0.187	0.26	0.214	0.231	0.346
2359	14/08/2006	0.292	0.266	0.2	0.188	0.26	0.214	0.231	0.346
559	15/08/2006	0.288	0.263	0.2	0.188	0.261	0.214	0.231	0.346
1159	15/08/2006	0.294	0.263	0.199	0.188	0.261	0.214	0.231	0.346
1759	15/08/2006	0.338	0.273	0.205	0.194	0.269	0.215	0.232	0.345
2359	15/08/2006	0.336	0.283	0.205	0.195	0.271	0.216	0.236	0.345
559	16/08/2006	0.333	0.286	0.204	0.196	0.272	0.217	0.238	0.345
1159	16/08/2006	0.34	0.29	0.204	0.196	0.272	0.218	0.24	0.349
1759	16/08/2006	0.352	0.296	0.204	0.195	0.271	0.218	0.24	0.357
2359	16/08/2006	0.341	0.297	0.206	0.196	0.271	0.218	0.24	0.363
559	17/08/2006	0.335	0.295	0.205	0.197	0.271	0.218	0.24	0.368
1159	17/08/2006	0.344	0.296	0.205	0.196	0.271	0.219	0.241	0.371
1759	17/08/2006	0.355	0.302	0.207	0.196	0.271	0.219	0.241	0.374
2359	17/08/2006	0.344	0.301	0.209	0.196	0.27	0.219	0.241	0.375
559	18/08/2006	0.336	0.299	0.209	0.197	0.271	0.219	0.24	0.375
1159	18/08/2006	0.345	0.298	0.209	0.197	0.271	0.219	0.241	0.375
1759	18/08/2006	0.35	0.303	0.21	0.197	0.27	0.219	0.241	0.375
2359	18/08/2006	0.334	0.3	0.211	0.197	0.271	0.219	0.24	0.375
559	19/08/2006	0.325	0.295	0.21	0.198	0.271	0.219	0.24	0.375
1159	19/08/2006	0.33	0.293	0.209	0.197	0.271	0.22	0.24	0.375
1759	19/08/2006	0.338	0.296	0.209	0.197	0.27	0.22	0.24	0.375
2359	19/08/2006	0.324	0.294	0.21	0.197	0.27	0.22	0.24	0.374
559	20/08/2006	0.315	0.289	0.209	0.198	0.271	0.22	0.24	0.375
1159	20/08/2006	0.322	0.289	0.208	0.198	0.272	0.221	0.24	0.375
1759	20/08/2006	0.337	0.293	0.208	0.197	0.27	0.22	0.239	0.374
2359	20/08/2006	0.321	0.291	0.209	0.197	0.27	0.22	0.239	0.375
559	21/08/2006	0.311	0.287	0.208	0.198	0.27	0.22	0.239	0.375
1159	21/08/2006	0.318	0.285	0.208	0.198	0.271	0.221	0.24	0.374
1759	21/08/2006	0.332	0.29	0.209	0.197	0.27	0.221	0.239	0.374
2359	21/08/2006	0.318	0.289	0.21	0.197	0.27	0.221	0.239	0.374
559	22/08/2006	0.309	0.284	0.209	0.198	0.27	0.221	0.239	0.374
1159	22/08/2006	0.313	0.282	0.209	0.198	0.27	0.221	0.239	0.373
1759	22/08/2006	0.325	0.287	0.21	0.197	0.27	0.221	0.239	0.373
2359	22/08/2006	0.311	0.285	0.211	0.198	0.27	0.221	0.239	0.373
559	23/08/2006	0.305	0.281	0.21	0.198	0.27	0.221	0.239	0.372
1159	23/08/2006	0.302	0.278	0.209	0.198	0.27	0.221	0.239	0.372
1759	23/08/2006	0.302	0.277	0.208	0.198	0.27	0.221	0.238	0.372
2359	23/08/2006	0.3	0.276	0.208	0.197	0.27	0.221	0.238	0.372
559	24/08/2006	0.296	0.274	0.206	0.198	0.27	0.222	0.238	0.371
1159	24/08/2006	0.303	0.274	0.206	0.198	0.271	0.222	0.239	0.371
1759	24/08/2006	0.313	0.278	0.207	0.197	0.269	0.222	0.238	0.371
2359	24/08/2006	0.302	0.277	0.208	0.197	0.269	0.221	0.238	0.37
559	25/08/2006	0.294	0.273	0.207	0.197	0.269	0.221	0.238	0.37
1159	25/08/2006	0.295	0.272	0.206	0.197	0.269	0.222	0.238	0.37
1759	25/08/2006	0.307	0.274	0.206	0.196	0.268	0.221	0.238	0.369
2359	25/08/2006	0.296	0.273	0.207	0.197	0.269	0.221	0.238	0.37
559	26/08/2006	0.289	0.269	0.206	0.197	0.269	0.221	0.237	0.369
1159	26/08/2006	0.291	0.269	0.206	0.197	0.269	0.222	0.238	0.369
1759	26/08/2006	0.3	0.271	0.206	0.196	0.269	0.221	0.237	0.369
2359	26/08/2006	0.29	0.269	0.206	0.196	0.268	0.221	0.237	0.368
559	27/08/2006	0.281	0.266	0.205	0.197	0.269	0.221	0.237	0.368
1159	27/08/2006	0.285	0.265	0.205	0.197	0.269	0.222	0.238	0.367
1759	27/08/2006	0.296	0.268	0.205	0.196	0.268	0.221	0.237	0.367
2359	27/08/2006	0.285	0.266	0.205	0.196	0.268	0.221	0.237	0.367
559	28/08/2006	0.279	0.263	0.205	0.197	0.268	0.222	0.237	0.367
1159	28/08/2006	0.281	0.262	0.204	0.196	0.268	0.222	0.237	0.367
1759	28/08/2006	0.29	0.265	0.204	0.196	0.268	0.222	0.237	0.366
2359	28/08/2006	0.282	0.264	0.205	0.196	0.267	0.221	0.236	0.366
559	29/08/2006	0.276	0.261	0.205	0.196	0.268	0.221	0.236	0.366

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	29/08/2006	0.276	0.26	0.204	0.196	0.268	0.222	0.237	0.365
1759	29/08/2006	0.282	0.261	0.204	0.196	0.268	0.221	0.236	0.365
2359	29/08/2006	0.276	0.26	0.204	0.196	0.267	0.221	0.236	0.365
559	30/08/2006	0.272	0.258	0.203	0.196	0.267	0.221	0.236	0.365
1159	30/08/2006	0.271	0.257	0.203	0.196	0.268	0.221	0.236	0.365
1759	30/08/2006	0.273	0.256	0.202	0.195	0.268	0.221	0.236	0.364
2359	30/08/2006	0.277	0.256	0.201	0.195	0.267	0.221	0.236	0.364
559	31/08/2006	0.279	0.255	0.201	0.195	0.267	0.221	0.236	0.364
1159	31/08/2006	0.283	0.255	0.2	0.194	0.267	0.222	0.236	0.364
1759	31/08/2006	0.289	0.257	0.199	0.193	0.266	0.221	0.236	0.363
2359	31/08/2006	0.282	0.257	0.199	0.193	0.265	0.221	0.235	0.363
559	01/09/2006	0.278	0.256	0.199	0.194	0.266	0.221	0.235	0.363
1159	01/09/2006	0.282	0.256	0.198	0.193	0.266	0.221	0.236	0.363
1759	01/09/2006	0.293	0.259	0.199	0.192	0.265	0.221	0.235	0.362
2359	01/09/2006	0.285	0.26	0.2	0.193	0.264	0.22	0.235	0.362
559	02/09/2006	0.28	0.258	0.199	0.193	0.265	0.22	0.235	0.362
1159	02/09/2006	0.284	0.258	0.199	0.193	0.265	0.22	0.235	0.361
1759	02/09/2006	0.297	0.262	0.2	0.193	0.264	0.22	0.235	0.361
2359	02/09/2006	0.287	0.262	0.202	0.193	0.264	0.22	0.235	0.361
559	03/09/2006	0.28	0.259	0.201	0.194	0.264	0.22	0.235	0.361
1159	03/09/2006	0.282	0.258	0.201	0.194	0.264	0.22	0.235	0.36
1759	03/09/2006	0.294	0.262	0.201	0.193	0.264	0.22	0.235	0.36
2359	03/09/2006	0.284	0.261	0.202	0.194	0.264	0.22	0.234	0.361
559	04/09/2006	0.277	0.258	0.202	0.195	0.265	0.22	0.234	0.36
1159	04/09/2006	0.279	0.257	0.201	0.195	0.265	0.221	0.235	0.36
1759	04/09/2006	0.29	0.26	0.202	0.194	0.265	0.22	0.235	0.36
2359	04/09/2006	0.28	0.259	0.202	0.194	0.264	0.22	0.234	0.359
559	05/09/2006	0.274	0.257	0.202	0.195	0.265	0.22	0.234	0.359
1159	05/09/2006	0.274	0.256	0.201	0.195	0.266	0.221	0.235	0.359
1759	05/09/2006	0.283	0.257	0.201	0.194	0.265	0.221	0.234	0.359
2359	05/09/2006	0.276	0.257	0.202	0.194	0.265	0.221	0.234	0.359
559	06/09/2006	0.27	0.255	0.201	0.195	0.266	0.221	0.234	0.358
1159	06/09/2006	0.271	0.253	0.2	0.195	0.266	0.221	0.235	0.358
1759	06/09/2006	0.277	0.254	0.2	0.194	0.265	0.221	0.234	0.358
2359	06/09/2006	0.27	0.253	0.2	0.194	0.265	0.221	0.234	0.357
559	07/09/2006	0.265	0.252	0.2	0.194	0.265	0.221	0.234	0.357
1159	07/09/2006	0.264	0.251	0.199	0.194	0.266	0.221	0.235	0.357
1759	07/09/2006	0.27	0.251	0.199	0.193	0.264	0.221	0.234	0.357
2359	07/09/2006	0.265	0.25	0.199	0.193	0.264	0.22	0.234	0.357
559	08/09/2006	0.261	0.249	0.198	0.193	0.265	0.221	0.234	0.357
1159	08/09/2006	0.262	0.248	0.198	0.193	0.265	0.221	0.234	0.357
1759	08/09/2006	0.271	0.25	0.198	0.192	0.264	0.221	0.234	0.356
2359	08/09/2006	0.265	0.249	0.199	0.192	0.263	0.22	0.234	0.356
559	09/09/2006	0.26	0.248	0.198	0.193	0.264	0.22	0.234	0.356
1159	09/09/2006	0.261	0.247	0.198	0.193	0.264	0.221	0.234	0.356
1759	09/09/2006	0.268	0.248	0.198	0.192	0.263	0.22	0.234	0.355
2359	09/09/2006	0.262	0.248	0.198	0.192	0.263	0.22	0.234	0.355
559	10/09/2006	0.258	0.246	0.198	0.193	0.263	0.22	0.233	0.355
1159	10/09/2006	0.258	0.245	0.198	0.193	0.264	0.221	0.234	0.355
1759	10/09/2006	0.263	0.246	0.197	0.192	0.263	0.22	0.233	0.354
2359	10/09/2006	0.257	0.245	0.198	0.192	0.263	0.22	0.233	0.354
559	11/09/2006	0.254	0.244	0.197	0.193	0.263	0.22	0.233	0.354
1159	11/09/2006	0.254	0.242	0.197	0.192	0.263	0.221	0.234	0.354
1759	11/09/2006	0.259	0.243	0.196	0.191	0.262	0.22	0.233	0.354
2359	11/09/2006	0.253	0.242	0.196	0.191	0.262	0.22	0.233	0.353
559	12/09/2006	0.248	0.24	0.195	0.192	0.263	0.22	0.233	0.353
1159	12/09/2006	0.249	0.239	0.195	0.191	0.263	0.22	0.233	0.353
1759	12/09/2006	0.254	0.24	0.194	0.19	0.261	0.22	0.233	0.353
2359	12/09/2006	0.248	0.239	0.194	0.19	0.261	0.219	0.232	0.352
559	13/09/2006	0.245	0.237	0.194	0.19	0.262	0.219	0.233	0.353
1159	13/09/2006	0.246	0.236	0.193	0.19	0.262	0.22	0.233	0.353
1759	13/09/2006	0.252	0.238	0.193	0.189	0.261	0.219	0.232	0.352
2359	13/09/2006	0.247	0.237	0.193	0.189	0.26	0.219	0.232	0.352
559	14/09/2006	0.244	0.236	0.193	0.189	0.26	0.219	0.232	0.352
1159	14/09/2006	0.244	0.235	0.192	0.189	0.26	0.219	0.232	0.352
1759	14/09/2006	0.248	0.235	0.191	0.188	0.259	0.218	0.232	0.352
2359	14/09/2006	0.245	0.234	0.191	0.188	0.259	0.218	0.232	0.351
559	15/09/2006	0.245	0.233	0.19	0.188	0.26	0.218	0.232	0.351
1159	15/09/2006	0.248	0.233	0.19	0.187	0.259	0.218	0.232	0.351
1759	15/09/2006	0.254	0.234	0.19	0.187	0.258	0.218	0.232	0.351
2359	15/09/2006	0.249	0.234	0.19	0.186	0.258	0.217	0.231	0.351
559	16/09/2006	0.247	0.233	0.189	0.186	0.257	0.217	0.231	0.35

MLSB Coke Deep Cover Soil Volumetric Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	16/09/2006	0.248	0.232	0.188	0.186	0.258	0.217	0.231	0.35
1759	16/09/2006	0.253	0.234	0.188	0.185	0.257	0.217	0.231	0.35
2359	16/09/2006	0.251	0.234	0.189	0.185	0.256	0.217	0.231	0.35
559	17/09/2006	0.27	0.234	0.188	0.185	0.256	0.217	0.231	0.349
1159	17/09/2006	0.285	0.235	0.188	0.185	0.256	0.216	0.231	0.349
1759	17/09/2006	0.295	0.238	0.188	0.184	0.256	0.216	0.231	0.349
2359	17/09/2006	0.293	0.24	0.188	0.184	0.255	0.216	0.23	0.349
559	18/09/2006	0.293	0.241	0.188	0.184	0.255	0.216	0.23	0.349
1159	18/09/2006	0.296	0.243	0.189	0.185	0.255	0.216	0.231	0.348
1759	18/09/2006	0.306	0.246	0.189	0.184	0.254	0.215	0.23	0.349
2359	18/09/2006	0.298	0.248	0.189	0.184	0.254	0.215	0.23	0.349
559	19/09/2006	0.293	0.249	0.189	0.184	0.254	0.215	0.23	0.348
1159	19/09/2006	0.298	0.25	0.189	0.184	0.254	0.215	0.23	0.348
1759	19/09/2006	0.31	0.253	0.189	0.184	0.253	0.215	0.23	0.348
2359	19/09/2006	0.304	0.255	0.19	0.184	0.253	0.214	0.23	0.348
559	20/09/2006	0.3	0.256	0.19	0.185	0.253	0.215	0.23	0.347
1159	20/09/2006	0.305	0.256	0.191	0.184	0.253	0.215	0.23	0.347
1759	20/09/2006	0.307	0.258	0.191	0.184	0.253	0.214	0.23	0.347
2359	20/09/2006	0.303	0.259	0.192	0.184	0.253	0.214	0.23	0.347
559	21/09/2006	0.301	0.259	0.192	0.185	0.253	0.214	0.23	0.346
1159	21/09/2006	0.302	0.26	0.192	0.185	0.253	0.214	0.23	0.346
1759	21/09/2006	0.307	0.261	0.192	0.184	0.253	0.214	0.23	0.346
2359	21/09/2006	0.303	0.262	0.193	0.185	0.252	0.214	0.229	0.346
559	22/09/2006	0.3	0.261	0.193	0.185	0.253	0.214	0.229	0.345
1159	22/09/2006	0.301	0.262	0.193	0.185	0.253	0.215	0.23	0.345
1759	22/09/2006	0.311	0.263	0.193	0.185	0.252	0.214	0.229	0.345
2359	22/09/2006	0.301	0.263	0.194	0.185	0.252	0.213	0.229	0.345
559	23/09/2006	0.295	0.262	0.193	0.186	0.253	0.214	0.229	0.345
1159	23/09/2006	0.298	0.262	0.193	0.186	0.253	0.214	0.23	0.345
1759	23/09/2006	0.305	0.263	0.193	0.185	0.252	0.213	0.229	0.344
2359	23/09/2006	0.296	0.263	0.193	0.185	0.252	0.214	0.229	0.344
559	24/09/2006	0.295	0.262	0.193	0.185	0.252	0.214	0.229	0.344
1159	24/09/2006	0.296	0.262	0.194	0.185	0.253	0.214	0.23	0.344
1759	24/09/2006	0.304	0.263	0.193	0.185	0.252	0.213	0.229	0.343
2359	24/09/2006	0.295	0.263	0.194	0.185	0.252	0.213	0.229	0.343
559	25/09/2006	0.293	0.262	0.194	0.185	0.252	0.214	0.229	0.343
1159	25/09/2006	0.294	0.262	0.194	0.185	0.252	0.214	0.229	0.343
1759	25/09/2006	0.299	0.263	0.194	0.185	0.252	0.213	0.229	0.342
2359	25/09/2006	0.294	0.263	0.194	0.185	0.252	0.213	0.229	0.342
559	26/09/2006	0.289	0.262	0.194	0.185	0.252	0.213	0.229	0.342
1159	26/09/2006	0.29	0.261	0.194	0.185	0.252	0.214	0.229	0.342
1759	26/09/2006	0.296	0.262	0.193	0.185	0.252	0.213	0.229	0.341
2359	26/09/2006	0.289	0.261	0.193	0.185	0.251	0.213	0.229	0.342
559	27/09/2006	0.285	0.26	0.192	0.185	0.252	0.213	0.229	0.341
1159	27/09/2006	0.289	0.259	0.192	0.185	0.252	0.213	0.229	0.341
1759	27/09/2006	0.298	0.262	0.192	0.184	0.251	0.213	0.229	0.341
2359	27/09/2006	0.296	0.262	0.193	0.184	0.251	0.213	0.229	0.341
559	28/09/2006	0.317	0.264	0.193	0.185	0.251	0.213	0.229	0.341
1159	28/09/2006	0.321	0.267	0.193	0.185	0.251	0.213	0.229	0.341
1759	28/09/2006	0.321	0.271	0.194	0.185	0.251	0.213	0.229	0.34
2359	28/09/2006	0.314	0.272	0.194	0.185	0.251	0.213	0.228	0.34
559	29/09/2006	0.309	0.271	0.194	0.185	0.251	0.213	0.228	0.34
1159	29/09/2006	0.311	0.272	0.194	0.185	0.251	0.213	0.229	0.34
1759	29/09/2006	0.315	0.273	0.194	0.185	0.25	0.212	0.228	0.339
2359	29/09/2006	0.31	0.273	0.194	0.185	0.25	0.212	0.228	0.339
559	30/09/2006	0.308	0.272	0.194	0.185	0.251	0.213	0.228	0.339
1159	30/09/2006	0.312	0.273	0.195	0.185	0.251	0.213	0.229	0.339
1759	30/09/2006	0.318	0.275	0.195	0.184	0.25	0.212	0.228	0.338
2359	30/09/2006	0.315	0.275	0.195	0.185	0.25	0.212	0.228	0.338
559	01/10/2006	0.311	0.275	0.195	0.185	0.251	0.212	0.228	0.338
1159	01/10/2006	0.316	0.276	0.195	0.185	0.251	0.212	0.228	0.338
1759	01/10/2006	0.318	0.278	0.195	0.185	0.25	0.212	0.228	0.338
2359	01/10/2006	0.313	0.278	0.195	0.185	0.25	0.212	0.228	0.338
559	02/10/2006	0.312	0.277	0.195	0.185	0.25	0.212	0.228	0.338
1159	02/10/2006	0.312	0.277	0.195	0.185	0.25	0.212	0.228	0.338
1759	02/10/2006	0.317	0.278	0.195	0.184	0.25	0.212	0.228	0.337
2359	02/10/2006	0.309	0.277	0.195	0.184	0.249	0.212	0.228	0.337
559	03/10/2006	0.303	0.276	0.194	0.184	0.249	0.211	0.228	0.337
1159	03/10/2006	0.308	0.276	0.195	0.185	0.25	0.212	0.228	0.337
1759	03/10/2006	0.316	0.277	0.194	0.184	0.249	0.211	0.228	0.337

## **Deep Cover - Temperature Data**

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	12/04/2005	0.8	0.3	0.1	-0.1	-0.3	-0.3	-0.1	3.4
1759	12/04/2005	4.6	0.6	-0.4	-0.6	-0.7	-0.8	-0.6	2.9
2359	12/04/2005	1.9	0.6	-0.4	-0.6	-0.7	-0.7	-0.5	3
559	13/04/2005	0.6	0.3	-0.1	-0.3	-0.5	-0.5	-0.3	3.2
1159	13/04/2005	0.5	0.4	0.3	0	-0.1	-0.1	0	3.5
1759	13/04/2005	1.4	0.6	0.3	0	-0.1	-0.1	0	3.5
2359	13/04/2005	1.2	0.3	-0.3	-0.5	-0.6	-0.6	-0.5	3
559	14/04/2005	0.7	0.2	-0.2	-0.4	-0.5	-0.5	-0.3	3.1
1159	14/04/2005	1.5	0.3	-0.1	-0.4	-0.5	-0.5	-0.3	3.1
1759	14/04/2005	1.7	0.5	-0.2	-0.4	-0.5	-0.5	-0.4	3.1
2359	14/04/2005	0.7	0.3	-0.1	-0.3	-0.4	-0.4	-0.3	3.2
559	15/04/2005	0.3	0.1	-0.1	-0.3	-0.4	-0.4	-0.3	3.2
1159	15/04/2005	0.5	0.4	0.4	0.2	0	0	0.1	3.6
1759	15/04/2005	2.5	0.2	-0.3	-0.4	-0.5	-0.6	-0.5	3
2359	15/04/2005	1.2	0.5	-0.3	-0.4	-0.5	-0.6	-0.5	3
559	16/04/2005	0.1	0.2	-0.1	-0.1	-0.3	-0.5	-0.3	3.2
1159	16/04/2005	1.1	0.4	0.4	0.4	0.3	0	0.1	3.5
1759	16/04/2005	5.1	1	-0.5	-0.5	-0.6	-0.8	-0.7	2.8
2359	16/04/2005	3.3	1.2	-0.3	-0.3	-0.4	-0.6	-0.5	3
559	17/04/2005	2.4	1.1	0	0	-0.1	-0.3	-0.2	3.2
1159	17/04/2005	3.5	0.9	0.2	0.2	0	-0.2	-0.1	3.3
1759	17/04/2005	5.8	1.1	-0.8	-0.8	-1	-1.1	-1.1	2.4
2359	17/04/2005	2.9	1.3	-0.2	-0.2	-0.3	-0.5	-0.4	3
559	18/04/2005	1	0.4	-0.3	-0.3	-0.4	-0.6	-0.5	2.9
1159	18/04/2005	2.9	0.4	0.1	0.2	0.1	-0.1	0	3.3
1759	18/04/2005	8.2	2	-0.4	-0.4	-0.5	-0.7	-0.6	2.8
2359	18/04/2005	4.2	2.2	-0.3	-0.3	-0.4	-0.5	-0.5	2.9
559	19/04/2005	1.3	1.1	-0.2	-0.2	-0.3	-0.4	-0.3	3.1
1159	19/04/2005	3.7	1.1	0.6	0.6	0.5	0.3	0.3	3.6
1759	19/04/2005	7.6	2.3	-0.4	-0.4	-0.6	-0.7	-0.6	2.7
2359	19/04/2005	4.9	2.5	-0.4	-0.5	-0.6	-0.7	-0.6	2.8
559	20/04/2005	2.6	1.6	-0.3	-0.5	-0.6	-0.7	-0.6	2.8
1159	20/04/2005	5.7	1.5	0.1	-0.1	-0.2	-0.3	-0.3	3
1759	20/04/2005	9.3	3.1	-0.3	-0.6	-0.7	-0.8	-0.7	2.6
2359	20/04/2005	6	3.3	0	-0.7	-0.7	-0.8	-0.8	2.6
559	21/04/2005	3.1	2.3	0.2	-0.4	-0.5	-0.6	-0.5	2.8
1159	21/04/2005	5.8	1.9	0.5	0.1	0	-0.2	-0.1	3.2
1759	21/04/2005	11.7	3.8	0.2	-0.6	-0.8	-0.8	-0.8	2.5
2359	21/04/2005	7.2	4.5	0.9	-0.5	-0.6	-0.7	-0.6	2.7
559	22/04/2005	3.8	3.3	1.1	-0.2	-0.3	-0.4	-0.3	3
1159	22/04/2005	6.9	3.2	1.8	0.8	0.7	0.5	0.5	3.7
1759	22/04/2005	11.3	4	0.5	-0.7	-0.9	-0.9	-0.9	2.4
2359	22/04/2005	8.7	5	1.3	-0.6	-0.7	-0.7	-0.7	2.6
559	23/04/2005	6	4.2	1.5	-0.5	-0.6	-0.7	-0.6	2.7
1159	23/04/2005	7.8	3.7	1.7	0	-0.1	-0.2	-0.2	3.1
1759	23/04/2005	11.4	4.6	1.2	-0.7	-0.8	-0.9	-0.8	2.5
2359	23/04/2005	7.1	4.9	1.9	-0.3	-0.5	-0.5	-0.5	2.9
559	24/04/2005	3.5	3.3	1.8	-0.2	-0.4	-0.5	-0.4	2.9
1159	24/04/2005	6.7	2.7	1.6	0.2	-0.1	-0.2	-0.1	3.1
1759	24/04/2005	12	4.4	1.2	-0.3	-0.6	-0.7	-0.7	2.6
2359	24/04/2005	7.2	4.7	1.9	-0.1	-0.5	-0.6	-0.5	2.8
559	25/04/2005	3.4	3.3	1.9	0.1	-0.4	-0.4	-0.4	2.9
1159	25/04/2005	5.5	3	2.3	1	0.5	0.4	0.4	3.6
1759	25/04/2005	9.9	3.7	1.1	-0.2	-0.7	-0.8	-0.7	2.6
2359	25/04/2005	6.3	3.9	1.6	0	-0.6	-0.6	-0.6	2.7
559	26/04/2005	3.8	2.9	1.7	0.3	-0.4	-0.4	-0.4	2.9
1159	26/04/2005	3.3	2.2	1.6	0.5	-0.1	-0.1	-0.1	3.2
1759	26/04/2005	4.5	1.8	1.1	0.3	-0.2	-0.3	-0.2	3
2359	26/04/2005	2.5	1.5	1	0.3	-0.2	-0.2	-0.2	3.1
559	27/04/2005	1.4	0.9	0.8	0.2	-0.2	-0.2	-0.1	3.1
1159	27/04/2005	1.2	0.5	0.5	0.1	-0.2	-0.2	-0.2	3.1
1759	27/04/2005	3.3	0.3	0.2	-0.1	-0.3	-0.4	-0.3	3
2359	27/04/2005	1.5	0.3	0.1	-0.1	-0.3	-0.3	-0.3	3
559	28/04/2005	0.8	0.2	0.1	0	-0.2	-0.3	-0.2	3.1
1159	28/04/2005	1.1	0.7	0.8	0.7	0.5	0.4	0.5	3.7
1759	28/04/2005	0.8	-0.1	-0.1	-0.2	-0.3	-0.4	-0.4	2.9
2359	28/04/2005	0.6	0.1	0.1	0	-0.1	-0.1	-0.1	3.2
559	29/04/2005	0.4	-0.1	-0.1	-0.1	-0.2	-0.3	-0.2	3
1159	29/04/2005	0.7	0.2	0.3	0.3	0.2	0.1	0.1	3.4
1759	29/04/2005	0.4	0	0	0	-0.1	-0.1	-0.1	3.2
2359	29/04/2005	0.3	0	0	0	-0.1	-0.1	-0.1	3.2
559	30/04/2005	0.2	-0.1	-0.1	-0.1	-0.2	-0.3	-0.2	3.1
1159	30/04/2005	0.6	0.3	0.4	0.4	0.4	0.3	0.3	3.6

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	
1759	30/04/2005	0.4	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	3
2359	30/04/2005	0	-0.3	-0.4	-0.4	-0.4	-0.5	-0.4	2.9
559	01/05/2005	0.1	0	0	0	-0.1	-0.1	-0.1	3.2
1159	01/05/2005	0.5	0.2	0.2	0.3	0.2	0.1	0.2	3.4
1759	01/05/2005	2.1	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	3
2359	01/05/2005	0.9	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2	3.1
559	02/05/2005	0	0	-0.1	0	-0.1	-0.1	0	3.2
1159	02/05/2005	0.4	0.1	0.2	0.3	0.2	0.1	0.1	3.3
1759	02/05/2005	7.6	-0.1	-0.3	-0.3	-0.3	-0.4	-0.4	2.9
2359	02/05/2005	3.7	0.2	-0.4	-0.5	-0.6	-0.6	-0.6	2.7
559	03/05/2005	1.4	0.7	0.5	0.4	0.3	0.2	0.3	3.5
1159	03/05/2005	2.4	0.3	0.4	0.3	0.2	0.1	0.1	3.3
1759	03/05/2005	10.3	1.9	-0.1	-0.4	-0.5	-0.6	-0.5	2.8
2359	03/05/2005	6.7	3.2	0.6	-0.3	-0.7	-0.7	-0.6	2.7
559	04/05/2005	3.4	3.1	1.5	0.5	0.1	0	0.1	3.3
1159	04/05/2005	6.1	2.2	1.4	0.6	0	-0.1	-0.1	3.2
1759	04/05/2005	12	4.8	1.5	0.4	-0.1	-0.2	-0.1	3.1
2359	04/05/2005	8	5.2	1.7	0	-0.8	-0.8	-0.8	2.6
559	05/05/2005	4.2	4.5	2.5	0.8	-0.1	-0.1	-0.1	3.2
1159	05/05/2005	7.3	3.8	2.6	1.3	0.3	0.2	0.2	3.4
1759	05/05/2005	9.7	5	1.8	0.2	-0.6	-0.7	-0.6	2.7
2359	05/05/2005	7.7	5.5	2.7	0.9	-0.2	-0.2	-0.2	3.1
559	06/05/2005	6.1	4.7	2.6	0.9	-0.3	-0.3	-0.3	3
1159	06/05/2005	7.4	4.4	2.8	1.2	0	0	0	3.2
1759	06/05/2005	10.8	5.1	2.4	0.8	-0.4	-0.4	-0.4	2.9
2359	06/05/2005	7.4	5.2	2.6	0.8	-0.6	-0.6	-0.6	2.8
559	07/05/2005	4.7	4.7	3.3	1.8	0.4	0.4	0.4	3.6
1159	07/05/2005	7.3	3.5	2.7	1.5	0.2	0.1	0.1	3.3
1759	07/05/2005	13.7	5.3	2.1	0.7	-0.5	-0.5	-0.5	2.8
2359	07/05/2005	9.3	6.1	2.7	0.8	-0.6	-0.6	-0.5	2.8
559	08/05/2005	5.3	5	3.2	1.5	-0.1	-0.1	-0.1	3.2
1159	08/05/2005	8.5	4.1	3	1.6	0	0	0	3.2
1759	08/05/2005	14.6	6.4	2.6	1	-0.6	-0.6	-0.6	2.7
2359	08/05/2005	10.2	7.3	3.5	1.4	-0.4	-0.4	-0.4	2.9
559	09/05/2005	7.4	5.9	3.6	1.6	-0.4	-0.4	-0.4	2.9
1159	09/05/2005	7.5	5.5	4.1	2.6	0.6	0.5	0.5	3.7
1759	09/05/2005	10.4	5.2	3.1	1.6	-0.3	-0.3	-0.3	3
2359	09/05/2005	6.3	4.7	3	1.5	-0.3	-0.4	-0.3	3
559	10/05/2005	3.6	3.6	3.1	2	0.2	0.1	0.2	3.5
1159	10/05/2005	4	2.4	2.5	1.8	0.2	0.1	0.1	3.4
1759	10/05/2005	11.4	3.7	2.2	1.4	0.1	0	0	3.3
2359	10/05/2005	7.2	4.2	2.2	1.1	-0.3	-0.3	-0.3	3
559	11/05/2005	4.1	3.4	2.6	1.7	0.3	0.2	0.2	3.5
1159	11/05/2005	6.7	2.6	2.4	1.8	0.4	0.3	0.2	3.5
1759	11/05/2005	12.4	4.3	1.6	0.7	-0.5	-0.6	-0.6	2.7
2359	11/05/2005	9.5	5.3	2.2	0.7	-0.7	-0.8	-0.7	2.6
559	12/05/2005	6.8	5.4	3.4	2	0.4	0.2	0.2	3.5
1159	12/05/2005	9.3	4.4	3	1.9	0.2	-0.1	-0.1	3.2
1759	12/05/2005	11.2	5.1	2.1	0.6	-1.1	-1.3	-1.3	2
2359	12/05/2005	7.7	5.9	3.5	2	0.1	-0.2	-0.1	3.2
559	13/05/2005	5.4	5.1	3.9	2.6	0.7	0.3	0.3	3.6
1159	13/05/2005	7.4	3.9	3.3	2.4	0.5	0.1	0.1	3.4
1759	13/05/2005	13.8	6	3	1.8	0.1	-0.3	-0.3	3
2359	13/05/2005	9.7	7	3.6	1.9	0	-0.4	-0.4	2.9
559	14/05/2005	6.5	6.2	4.4	2.8	0.8	0.3	0.3	3.5
1159	14/05/2005	9	5.1	4	2.8	0.7	0.1	0.1	3.3
1759	14/05/2005	14.3	7.2	3.6	2.2	0.2	-0.5	-0.4	2.9
2359	14/05/2005	11.7	8.3	4.3	2.2	0	-0.6	-0.6	2.7
559	15/05/2005	9.1	7.8	4.9	2.8	0.4	-0.4	-0.3	3
1159	15/05/2005	11.8	7.5	5.4	3.6	1.2	0.2	0.1	3.4
1759	15/05/2005	13.7	8.7	4.9	2.9	0.5	-0.5	-0.5	2.8
2359	15/05/2005	11.9	9	5.3	3.1	0.5	-0.6	-0.6	2.7
559	16/05/2005	9.6	8.3	5.5	3.5	0.8	-0.5	-0.5	2.8
1159	16/05/2005	12.9	8.2	6.1	4.3	1.7	0.3	0.1	3.3
1759	16/05/2005	17	10.3	5.9	3.9	1.4	0.1	-0.3	2.9
2359	16/05/2005	14.2	11	6.5	4	1.3	0.1	-0.5	2.8
559	17/05/2005	11.4	10.2	7	4.7	1.8	0.6	-0.3	3
1159	17/05/2005	10.9	9.3	7.4	5.5	2.8	1.5	0.3	3.5
1759	17/05/2005	12.6	8.8	6.7	5	2.6	1.3	-0.2	3.1
2359	17/05/2005	11.4	9.1	6.6	4.9	2.7	1.5	-0.1	3
559	18/05/2005	10.3	8.3	6.5	4.9	2.8	1.6	0.3	2.9
1159	18/05/2005	10.2	8.2	6.4	5.1	3.1	2.1	0.9	3.1
1759	18/05/2005	10.5	8.3	6.7	5.4	3.6	2.6	1.5	3.3

MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
2359	18/05/2005	10.5	8.1	6.5	5.2	3.5	2.6	1.5	3.1
559	19/05/2005	10.1	8	6.5	5.3	3.7	2.8	1.7	3.1
1159	19/05/2005	11.7	8.3	7	5.9	4.4	3.5	2.4	3.5
1759	19/05/2005	15.3	9.4	6.8	5.6	4.1	3.3	2.2	3.2
2359	19/05/2005	12.8	9.7	7.1	5.6	4	3.2	2.2	3
559	20/05/2005	10.7	9	7.4	6	4.4	3.6	2.6	3.1
1159	20/05/2005	13.4	8.7	7.6	6.5	4.9	4.1	3.1	3.3
1759	20/05/2005	16.5	11.1	7.5	6.1	4.6	3.9	2.9	3
2359	20/05/2005	12.6	11.4	8	6.1	4.5	3.8	2.8	2.8
559	21/05/2005	9.7	10.5	8.8	7.3	5.5	4.7	3.8	3.5
1159	21/05/2005	14	9.6	8.5	7.4	5.7	4.9	3.9	3.3
1759	21/05/2005	15.9	11.2	7.4	5.7	4.1	3.3	2.4	1.7
2359	21/05/2005	12.5	12.5	9.5	7.5	5.8	5.1	4.2	3.2
559	22/05/2005	10.3	10.9	9.4	7.8	6	5.2	4.4	3.2
1159	22/05/2005	13	10.2	9.3	8.3	6.6	5.7	4.8	3.4
1759	22/05/2005	17.2	12.7	9.1	7.7	6.2	5.5	4.5	3
2359	22/05/2005	12.7	13.2	10	8.1	6.5	5.8	4.9	3.1
559	23/05/2005	9.2	11.5	10.3	8.9	7.1	6.4	5.4	3.5
1159	23/05/2005	11	10.5	10.1	9.3	7.7	6.9	5.9	3.8
1759	23/05/2005	14.1	11.5	9.5	8.5	7.2	6.4	5.5	3.2
2359	23/05/2005	11.4	11.9	10.1	8.9	7.6	6.9	5.9	3.6
559	24/05/2005	9.2	10.6	10.1	9.2	7.9	7.2	6.3	3.7
1159	24/05/2005	9.3	9.5	9.7	9.2	8	7.4	6.4	3.8
1759	24/05/2005	10.7	9.3	9	8.7	7.7	7.1	6.2	3.5
2359	24/05/2005	9.1	9.4	9.2	8.9	8.2	7.6	6.7	3.8
559	25/05/2005	7.9	8.5	8.8	8.6	8	7.5	6.6	3.7
1159	25/05/2005	7.9	8.1	8.7	8.7	8.2	7.7	6.9	3.9
1759	25/05/2005	9.2	8.4	8.7	8.8	8.4	8	7.2	4.2
2359	25/05/2005	7.9	8	8.2	8.3	8	7.6	6.9	3.9
559	26/05/2005	6.3	7.3	8	8.1	7.9	7.6	6.9	3.9
1159	26/05/2005	9.1	7.5	8.3	8.6	8.4	8.1	7.5	4.4
1759	26/05/2005	15.1	9.4	7.9	7.9	7.8	7.6	7	4
2359	26/05/2005	11.6	10.4	8.3	7.6	7.3	7.2	6.6	3.7
559	27/05/2005	8.3	10.1	9.8	9.2	8.7	8.4	7.9	4.9
1159	27/05/2005	11.6	8.6	8.7	8.5	8	7.6	7.1	4.2
1759	27/05/2005	17	11.3	8.8	8.2	7.7	7.4	6.9	4
2359	27/05/2005	13.1	12.2	9.6	8.4	7.6	7.4	6.9	4
559	28/05/2005	10.1	11.5	10.7	9.8	8.8	8.4	7.8	5
1159	28/05/2005	13.1	10.3	10	9.4	8.5	8	7.5	4.6
1759	28/05/2005	20.1	13.3	10.1	9.1	8.3	7.8	7.2	4.3
2359	28/05/2005	16.2	14.4	10.7	9	7.9	7.5	6.9	4
559	29/05/2005	12.9	13.6	11.9	10.4	9.1	8.6	7.9	5
1159	29/05/2005	16.2	12.8	11.8	10.8	9.4	8.8	8.1	5
1759	29/05/2005	21.7	15.2	11.5	10.1	8.8	8.2	7.5	4.4
2359	29/05/2005	17.7	15.7	12.1	10.1	8.6	8	7.3	4.2
559	30/05/2005	14.5	15	13.4	11.8	10.1	9.4	8.6	5.3
1159	30/05/2005	18.1	14	12.8	11.7	10	9.2	8.4	5
1759	30/05/2005	23.8	16.8	12.8	11.2	9.7	9	8.1	4.6
2359	30/05/2005	19.8	17.2	13.3	11.1	9.4	8.7	7.8	4.2
559	31/05/2005	16.2	16.3	14.4	12.6	10.7	9.9	9	5.2
1159	31/05/2005	20.1	15.7	14.4	13.1	11.2	10.3	9.3	5.4
1759	31/05/2005	26	18.6	14.1	12.4	10.7	9.9	8.9	4.9
2359	31/05/2005	21.2	18.8	14.6	12.3	10.4	9.5	8.5	4.4
559	01/06/2005	17.8	17.8	15.8	13.8	11.7	10.8	9.8	5.5
1159	01/06/2005	20.3	16.8	15.6	14.2	12.2	11.2	10.1	5.6
1759	01/06/2005	24.7	19	15.2	13.6	11.7	10.8	9.7	5.1
2359	01/06/2005	20.4	19.1	15.7	13.6	11.7	10.8	9.7	4.9
559	02/06/2005	17.2	17.7	16.4	14.7	12.6	11.7	10.5	5.6
1159	02/06/2005	19.7	16.7	16.1	14.9	13	12	10.8	5.7
1759	02/06/2005	24	18.6	15.7	14.4	12.7	11.8	10.6	5.4
2359	02/06/2005	20.6	18.7	15.9	14.2	12.5	11.6	10.4	5.1
559	03/06/2005	17.7	17.8	16.6	15.2	13.4	12.5	11.3	5.8
1159	03/06/2005	21.4	17.2	16.4	15.4	13.7	12.8	11.6	5.9
1759	03/06/2005	26.9	20.2	16.1	14.7	13.2	12.3	11.1	5.4
2359	03/06/2005	21.8	20.2	16.7	14.7	12.9	12.1	10.9	5.1
559	04/06/2005	18.4	19	17.5	15.9	14	13.1	11.9	6
1159	04/06/2005	18.6	17.8	17.2	16.1	14.3	13.4	12.2	6.1
1759	04/06/2005	23.8	18.6	16.6	15.6	14.1	13.2	12	5.8
2359	04/06/2005	20.5	19	16.7	15.3	13.9	13	11.8	5.6
559	05/06/2005	17.3	18	17.3	16.3	14.7	13.9	12.7	6.3
1159	05/06/2005	20.9	17.3	17	16.3	15	14.1	12.8	6.3
1759	05/06/2005	25.8	20	16.6	15.4	14.2	13.4	12.2	5.6
2359	05/06/2005	21.3	20.3	17.4	15.7	14.2	13.5	12.3	5.7

MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
559	06/06/2005	17	18.3	17.4	16.1	14.5	13.8	12.6	6
1159	06/06/2005	20.7	17.4	17.2	16.4	14.9	14.1	12.9	6.1
1759	06/06/2005	25.9	20.7	17.8	16.8	15.5	14.7	13.5	6.7
2359	06/06/2005	21.5	20.3	17.6	16	14.6	13.8	12.6	5.8
559	07/06/2005	18.1	19.4	18.6	17.4	15.9	15.1	13.9	7
1159	07/06/2005	21.6	18.5	18.1	17.4	16	15.1	13.9	6.9
1759	07/06/2005	26.6	21.1	17.6	16.4	15.2	14.4	13.2	6.2
2359	07/06/2005	21.9	21.1	18.3	16.6	15.1	14.3	13.2	6.1
559	08/06/2005	18.9	20.1	19.1	17.8	16.2	15.4	14.2	7.1
1159	08/06/2005	23	19.6	19.3	18.5	17	16.1	14.8	7.5
1759	08/06/2005	28.3	22.5	18.8	17.5	16.2	15.4	14.2	6.9
2359	08/06/2005	23.8	22.4	19.3	17.4	15.8	15	13.9	6.6
559	09/06/2005	20.1	20.8	19.4	18	16.2	15.4	14.2	6.8
1159	09/06/2005	23.2	20.1	19.2	18.2	16.6	15.7	14.5	7
1759	09/06/2005	25.6	22.6	19.9	18.7	17.2	16.3	15.1	7.5
2359	09/06/2005	21.8	21.6	19.5	18	16.4	15.6	14.4	6.8
559	10/06/2005	19	20.3	19.9	18.8	17.2	16.3	15.1	7.4
1159	10/06/2005	21.1	19.6	19.7	19.1	17.7	16.8	15.6	7.8
1759	10/06/2005	24.4	21	19.1	18.3	17.1	16.3	15.1	7.3
2359	10/06/2005	20.2	20.7	19.4	18.4	17.2	16.4	15.2	7.4
559	11/06/2005	17.1	19	19.6	19.1	17.9	17.1	15.9	8
1159	11/06/2005	18.4	17.6	18.8	18.7	17.8	17	15.9	7.9
1759	11/06/2005	19.1	18.1	18.2	18.1	17.4	16.8	15.6	7.7
2359	11/06/2005	16.5	17.5	18	18	17.4	16.8	15.7	7.8
559	12/06/2005	14.9	16.4	17.7	17.9	17.5	16.9	15.9	8
1159	12/06/2005	14.9	15.6	17.1	17.6	17.4	16.9	15.9	8.1
1759	12/06/2005	15.3	15.7	16.9	17.5	17.4	17	16.1	8.3
2359	12/06/2005	14.4	15.4	16.5	17	17.1	16.7	15.9	8.2
559	13/06/2005	13.6	14.8	16.2	16.8	16.9	16.7	15.9	8.3
1159	13/06/2005	13.9	14.6	15.9	16.6	16.8	16.6	15.8	8.3
1759	13/06/2005	16.9	15.1	15.5	16	16.3	16.1	15.4	8.1
2359	13/06/2005	16	15.9	15.9	16.1	16.3	16.2	15.5	8.4
559	14/06/2005	14.8	15.5	15.9	16.1	16.2	16.1	15.5	8.5
1159	14/06/2005	16.2	15.9	16.5	16.8	16.9	16.7	16.1	9.1
1759	14/06/2005	17.4	15.7	15.3	15.4	15.4	15.3	14.7	8
2359	14/06/2005	15.9	16.2	16	15.9	15.8	15.7	15.2	8.6
559	15/06/2005	13.7	15.2	16	16.1	16	15.8	15.3	8.8
1159	15/06/2005	14.3	15.1	16.2	16.6	16.6	16.4	15.8	9.4
1759	15/06/2005	16.7	15.7	15.7	16	16	15.9	15.4	9.1
2359	15/06/2005	15	15.6	15.7	15.7	15.8	15.7	15.2	9
559	16/06/2005	13	14.5	15.5	15.8	15.8	15.6	15.2	9.1
1159	16/06/2005	13.6	14	15.3	15.8	15.9	15.8	15.3	9.3
1759	16/06/2005	16.6	15.2	15	15.4	15.6	15.5	15	9.1
2359	16/06/2005	14.8	15.3	14.8	14.7	14.8	14.8	14.4	8.7
559	17/06/2005	11.9	14.3	15.4	15.6	15.6	15.6	15.2	9.6
1159	17/06/2005	14.7	13.4	14.5	15	15.1	15	14.6	9.1
1759	17/06/2005	19.2	15.9	14.8	14.9	15.1	15	14.7	9.2
2359	17/06/2005	16.6	16.1	15.2	14.8	14.8	14.8	14.4	9.1
559	18/06/2005	14	15.1	16	16	15.9	15.8	15.4	10.2
1159	18/06/2005	16.3	14.3	15.2	15.5	15.5	15.3	15	9.8
1759	18/06/2005	21.8	17.5	15.4	15.2	15.2	15	14.7	9.7
2359	18/06/2005	18.8	17.5	15.8	15	14.7	14.5	14.2	9.3
559	19/06/2005	15.7	16.5	16.8	16.4	15.8	15.6	15.3	10.4
1159	19/06/2005	17.7	15.2	15.6	15.6	15.1	14.8	14.4	9.5
1759	19/06/2005	18.9	16.7	15.7	15.4	15	14.7	14.3	9.5
2359	19/06/2005	16.9	16.4	15.8	15.2	14.7	14.5	14.1	9.3
559	20/06/2005	14	15.4	16.8	16.7	16.2	15.9	15.4	10.6
1159	20/06/2005	16.5	14.3	15.4	15.8	15.5	15.2	14.7	9.9
1759	20/06/2005	23.9	18.7	15.8	15.4	15.2	15	14.5	9.7
2359	20/06/2005	20.6	19	16.6	15.4	14.8	14.6	14.2	9.5
559	21/06/2005	17.1	17.4	17.2	16.4	15.6	15.3	14.8	10.1
1159	21/06/2005	19.8	17.5	17.4	17.1	16.3	15.9	15.4	10.6
1759	21/06/2005	23.7	19.5	16.9	16.2	15.5	15.1	14.6	9.9
2359	21/06/2005	21.1	19.9	17.5	16.2	15.3	14.9	14.4	9.7
559	22/06/2005	18.3	18.6	18.4	17.5	16.4	16	15.4	10.6
1159	22/06/2005	17.1	17	17.3	16.9	16	15.5	14.9	10.1
1759	22/06/2005	15.4	16.1	16.9	16.8	16.1	15.6	15	10.2
2359	22/06/2005	14.2	15.1	16.4	16.6	16.2	15.8	15.2	10.3
559	23/06/2005	13.2	14.1	15.8	16.3	16.2	15.8	15.2	10.3
1159	23/06/2005	12.3	13.4	15.3	16.1	16.2	16	15.4	10.4
1759	23/06/2005	12.2	13.1	14.8	15.8	16.1	16	15.5	10.5
2359	23/06/2005	11.6	12.6	14.2	15.1	15.6	15.6	15.2	10.3
559	24/06/2005	10.3	12.1	14.6	15.7	16.3	16.3	15.9	11.1



MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	24/06/2005	13.4	12.2	13.8	15.1	15.8	15.9	15.5	10.7
1759	24/06/2005	18.1	15.7	14	14.3	15.1	15.2	15	10.3
2359	24/06/2005	16.1	16	14.8	14.5	14.8	15	14.8	10.3
559	25/06/2005	13.8	14.6	15	14.9	14.9	15	14.8	10.5
1159	25/06/2005	13.3	13.7	14.6	14.9	14.9	14.9	14.7	10.5
1759	25/06/2005	14.3	14.4	14.8	15.1	15.2	15.2	15	10.8
2359	25/06/2005	13.3	13.7	14	14.1	14.2	14.3	14.1	10.1
559	26/06/2005	11.7	13.2	14.4	14.8	15	15	14.8	10.8
1159	26/06/2005	14.1	13.2	14.2	14.8	15.1	15	14.8	10.9
1759	26/06/2005	18.5	16.7	14.7	14.7	14.9	15	14.8	10.9
2359	26/06/2005	16	16.4	15	14.4	14.3	14.3	14.2	10.5
559	27/06/2005	13.3	15	15.8	15.6	15.2	15.2	15	11.3
1159	27/06/2005	15.3	14.6	15	15.2	15	14.9	14.7	11
1759	27/06/2005	20.4	17.3	14.8	14.5	14.3	14.2	14	10.4
2359	27/06/2005	18.3	17.8	15.9	15	14.5	14.4	14.2	10.6
559	28/06/2005	16.6	17.3	17.2	16.6	15.9	15.7	15.4	11.8
1159	28/06/2005	17	16.1	16.1	15.9	15.2	14.9	14.7	11.1
1759	28/06/2005	17.6	17.1	15.8	15.4	14.9	14.6	14.3	10.8
2359	28/06/2005	15.9	16.2	16.1	15.8	15.2	14.9	14.6	11
559	29/06/2005	14.7	15.2	15.8	15.8	15.3	15	14.6	11
1159	29/06/2005	15.3	15.1	15.7	15.9	15.5	15.3	14.9	11.2
1759	29/06/2005	19.9	17.2	15.3	15.1	14.8	14.7	14.3	10.6
2359	29/06/2005	18.3	17.7	16	15.2	14.8	14.6	14.3	10.7
559	30/06/2005	15.8	16.3	16.5	16	15.5	15.2	14.9	11.3
1159	30/06/2005	18.5	16.4	16.5	16.4	15.9	15.6	15.2	11.5
1759	30/06/2005	24.5	20.3	16.5	15.6	15.1	14.9	14.5	10.8
2359	30/06/2005	21.8	20.4	17.5	15.8	14.8	14.6	14.2	10.6
559	01/07/2005	19	19.1	18.7	17.5	16.2	15.8	15.4	11.7
1159	01/07/2005	20.4	18.6	18.2	17.6	16.4	15.9	15.4	11.6
1759	01/07/2005	24.8	21.6	18	16.7	15.6	15.2	14.6	10.8
2359	01/07/2005	21.6	21.1	18.9	17.2	15.8	15.4	14.8	11
559	02/07/2005	19	19.4	19.5	18.5	17.1	16.5	15.9	11.8
1159	02/07/2005	20.2	18.5	18.6	18.1	16.9	16.3	15.6	11.4
1759	02/07/2005	22.8	20.8	17.9	17	16	15.5	14.8	10.6
2359	02/07/2005	18.9	19.5	19.1	18.2	16.9	16.4	15.8	11.4
559	03/07/2005	17.4	17.9	18.5	18.3	17.2	16.7	16	11.5
1159	03/07/2005	17.9	17.6	18.4	18.4	17.7	17.2	16.5	11.8
1759	03/07/2005	21	19.4	18.1	17.9	17.3	16.9	16.3	11.4
2359	03/07/2005	19.7	19.3	18.3	17.6	17	16.7	16.1	11.3
559	04/07/2005	17.9	18.1	18.5	18.2	17.5	17.1	16.5	11.7
1159	04/07/2005	18.5	17.8	18.2	18.2	17.6	17.2	16.6	11.7
1759	04/07/2005	20.5	19.4	18.1	17.7	17.2	16.9	16.3	11.4
2359	04/07/2005	19.2	19.6	18.2	17.5	16.9	16.6	16.1	11.2
559	05/07/2005	17.8	18.6	18.9	18.5	17.8	17.5	16.9	12
1159	05/07/2005	19.1	18.6	18.6	18.5	17.9	17.5	17	12
1759	05/07/2005	21.9	20.9	18.5	17.8	17.2	16.9	16.3	11.5
2359	05/07/2005	21.7	21.6	19.3	18	17.2	16.9	16.3	11.5
559	06/07/2005	19.8	20.4	19.6	18.6	17.6	17.2	16.7	11.8
1159	06/07/2005	21	20.1	19.5	18.9	17.9	17.4	16.8	11.8
1759	06/07/2005	22.4	21.6	19.4	18.3	17.4	16.9	16.3	11.4
2359	06/07/2005	20.2	20.8	20	19	17.9	17.4	16.8	11.9
559	07/07/2005	18.5	19.4	20.2	19.7	18.7	18.2	17.5	12.5
1159	07/07/2005	18.6	18.3	19.3	19.4	18.6	18.1	17.4	12.3
1759	07/07/2005	19.9	19	18.5	18.4	17.8	17.4	16.7	11.6
2359	07/07/2005	19	19.1	18.9	18.5	18	17.6	17	11.9
559	08/07/2005	17.8	18.4	19.3	19.2	18.7	18.3	17.7	12.5
1159	08/07/2005	19.4	18.2	18.8	19	18.7	18.3	17.7	12.4
1759	08/07/2005	23.8	20.7	18.9	18.5	18.2	17.9	17.4	12.2
2359	08/07/2005	22.7	21.3	19.5	18.6	18	17.7	17.2	12
559	09/07/2005	20	20.1	19.8	19	18.3	17.9	17.4	12.2
1159	09/07/2005	19.3	19.4	20	19.8	19	18.6	18	12.8
1759	09/07/2005	23.2	20	19.2	19	18.4	18	17.4	12.2
2359	09/07/2005	21.5	20.5	19.3	18.6	18	17.7	17.1	11.9
559	10/07/2005	18.7	19	19.9	19.6	18.9	18.5	17.9	12.7
1159	10/07/2005	20.2	18.8	19.4	19.6	19	18.6	18	12.7
1759	10/07/2005	23.5	21.1	19.7	19.3	18.9	18.5	17.9	12.7
2359	10/07/2005	21.8	21	19.7	18.9	18.3	18	17.5	12.3
559	11/07/2005	19	19.5	20.2	19.8	19.2	18.8	18.2	13
1159	11/07/2005	21.3	19.4	20	20.1	19.5	19.1	18.4	13.1
1759	11/07/2005	25.4	21.4	19.2	18.4	17.9	17.6	17	11.8
2359	11/07/2005	22.6	21.5	20.3	19.3	18.5	18.2	17.6	12.4
559	12/07/2005	20	20.3	20.9	20.5	19.6	19.2	18.6	13.3
1159	12/07/2005	22.1	20	20.4	20.4	19.7	19.2	18.6	13.2

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1759	12/07/2005	28.3	23.2	20.5	19.7	19.1	18.7	18.1	12.7
2359	12/07/2005	25.4	23.3	21.1	19.8	18.8	18.4	17.9	12.5
559	13/07/2005	21.5	21.3	21.1	20.3	19.1	18.7	18	12.7
1159	13/07/2005	22.9	21	21.1	20.8	19.7	19.2	18.5	13.1
1759	13/07/2005	25.2	22.8	21	20.2	19.3	18.8	18.1	12.7
2359	13/07/2005	23	22	21.1	20.2	19.2	18.7	18	12.6
559	14/07/2005	20.3	20.4	21.3	20.9	19.9	19.4	18.7	13.1
1159	14/07/2005	21.8	20.2	21.1	21.2	20.5	19.9	19.1	13.5
1759	14/07/2005	25.9	23	21.4	20.9	20.4	19.9	19.2	13.5
2359	14/07/2005	23.6	22.6	21.1	20.2	19.5	19.1	18.4	12.7
559	15/07/2005	20.9	21.1	21.6	21.1	20.3	19.8	19.2	13.4
1159	15/07/2005	22.4	20.8	21.3	21.2	20.5	20	19.3	13.5
1759	15/07/2005	25.8	22.9	20.9	20.2	19.6	19.2	18.5	12.8
2359	15/07/2005	23.3	22.6	21.6	20.8	19.9	19.5	18.8	13.1
559	16/07/2005	21.1	21.1	21.5	21.1	20.2	19.7	19.1	13.3
1159	16/07/2005	20.6	20.1	20.7	20.7	20	19.5	18.8	13
1759	16/07/2005	22.8	21.3	21	20.9	20.4	20	19.3	13.5
2359	16/07/2005	21.7	21	20.7	20.5	20	19.7	19	13.2
559	17/07/2005	19.8	20	21.1	21.1	20.7	20.3	19.6	13.8
1159	17/07/2005	21.3	20	20.9	21.2	20.9	20.5	19.8	13.9
1759	17/07/2005	23.4	21.2	20.1	19.9	19.7	19.5	18.8	13
2359	17/07/2005	21.6	21.3	20.8	20.4	20	19.8	19.2	13.4
559	18/07/2005	19.3	19.9	20.7	20.7	20.3	20	19.4	13.6
1159	18/07/2005	19.7	18.9	19.8	20	19.8	19.5	18.9	13.1
1759	18/07/2005	20.6	20.8	20.6	20.7	20.6	20.3	19.8	14
2359	18/07/2005	18.5	19.6	20.2	20.3	20.1	19.9	19.4	13.7
559	19/07/2005	16.5	18.2	19.8	20.2	20.2	20	19.5	13.8
1159	19/07/2005	17.3	17.6	19.5	20.2	20.4	20.2	19.7	14
1759	19/07/2005	19.8	18.5	18.9	19.5	19.8	19.7	19.2	13.6
2359	19/07/2005	18.2	18.4	18.9	19.3	19.5	19.5	19.1	13.7
559	20/07/2005	16.2	17.2	18.9	19.5	19.8	19.8	19.4	14
1159	20/07/2005	18.4	17.6	18.7	19.5	19.9	19.8	19.4	14
1759	20/07/2005	21.2	19.7	18.8	19	19.3	19.4	19	13.8
2359	20/07/2005	18.7	19.1	19.1	19	19.1	19.1	18.9	13.7
559	21/07/2005	16.1	17.4	19	19.3	19.3	19.3	19.1	14
1159	21/07/2005	17	17.2	18.8	19.5	19.7	19.7	19.3	14.4
1759	21/07/2005	19.5	18.9	18.4	18.7	18.9	18.9	18.6	13.7
2359	21/07/2005	18.7	19.5	19	18.9	18.9	18.9	18.7	13.9
559	22/07/2005	16.9	18.4	19.2	19.2	19.2	19.1	18.9	14.2
1159	22/07/2005	18.2	18.4	19.1	19.5	19.5	19.4	19.1	14.4
1759	22/07/2005	21.2	20.2	18.8	18.6	18.5	18.5	18.2	13.7
2359	22/07/2005	19.3	19.9	19.6	19.2	18.9	18.8	18.6	14.1
559	23/07/2005	17.4	18.4	19.5	19.5	19.2	19.1	18.8	14.3
1159	23/07/2005	15.6	17.2	18.9	19.4	19.3	19.1	18.8	14.4
1759	23/07/2005	14.3	16.1	18.3	19.2	19.3	19.2	18.9	14.5
2359	23/07/2005	13.6	15.3	17.6	18.8	19.2	19.2	18.9	14.6
559	24/07/2005	13.1	14.6	17.1	18.4	19.1	19.2	19	14.7
1159	24/07/2005	13.5	14.5	16.5	17.9	18.8	19	18.9	14.6
1759	24/07/2005	14.7	15.6	16.3	17.4	18.5	18.7	18.7	14.5
2359	24/07/2005	14.6	15.9	16.5	17.2	18.1	18.5	18.5	14.5
559	25/07/2005	13.3	14.9	16.7	17.6	18.4	18.7	18.8	14.9
1159	25/07/2005	13.7	14.3	15.9	17.1	17.9	18.2	18.3	14.6
1759	25/07/2005	15.9	16.1	16	16.7	17.6	17.9	18	14.5
2359	25/07/2005	14.6	15.8	16.3	16.8	17.4	17.8	17.9	14.6
559	26/07/2005	12.9	14.4	16.2	16.9	17.5	17.8	17.9	14.9
1159	26/07/2005	14.4	14.7	16.2	17.3	18	18.2	18.3	15.3
1759	26/07/2005	16.2	16.4	15.8	16.2	17	17.3	17.4	14.6
2359	26/07/2005	15.4	16.6	16.3	16.4	16.9	17.2	17.4	14.8
559	27/07/2005	13.2	15.1	16.7	17.2	17.6	17.8	18	15.5
1159	27/07/2005	14.2	14.6	16.2	17.1	17.6	17.7	17.8	15.4
1759	27/07/2005	18.2	18.3	16	16.1	16.7	16.9	17	14.7
2359	27/07/2005	16.6	18.4	17	16.3	16.5	16.8	16.9	14.7
559	28/07/2005	14.6	16.7	17.3	17.1	17.1	17.3	17.4	15.3
1159	28/07/2005	14.7	15.7	16.4	16.7	16.8	16.8	16.9	14.9
1759	28/07/2005	15.5	16.4	16.7	16.9	17.1	17.2	17.3	15.3
2359	28/07/2005	15.2	16.1	16.3	16.5	16.7	16.8	16.9	14.9
559	29/07/2005	14	15.3	16.4	16.8	17	17.1	17.2	15.2
1159	29/07/2005	16.5	15.7	16.4	17	17.3	17.3	17.3	15.4
1759	29/07/2005	19.1	18.9	16.6	16.3	16.6	16.7	16.8	14.9
2359	29/07/2005	18.2	19	17.3	16.6	16.5	16.6	16.7	14.9
559	30/07/2005	16.3	17.4	17.5	17.1	16.8	16.9	16.9	15.2
1159	30/07/2005	17.6	17.4	17.7	17.7	17.5	17.4	17.4	15.5
1759	30/07/2005	20	20.5	17.7	17.1	16.9	16.8	16.8	15.1

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
2359	30/07/2005	19.3	20.5	18.3	17.1	16.6	16.6	16.6	14.9
559	31/07/2005	17.3	18.6	18.5	17.7	17.1	16.9	16.9	15.1
1159	31/07/2005	17.5	18.1	18.7	18.5	17.9	17.7	17.5	15.7
1759	31/07/2005	21.1	20.7	18.3	17.8	17.4	17.2	17	15.1
2359	31/07/2005	19.7	20.5	18.5	17.3	16.8	16.6	16.5	14.6
559	01/08/2005	17.5	18.6	18.7	18.1	17.4	17.2	17	15.1
1159	01/08/2005	19.7	18.8	18.8	18.6	18.1	17.8	17.5	15.5
1759	01/08/2005	22.8	21.4	18.3	17.5	17	16.7	16.5	14.5
2359	01/08/2005	20.3	21.2	19.6	18.3	17.5	17.3	17.1	15
559	02/08/2005	18	19.1	19.2	18.6	17.7	17.5	17.2	15
1159	02/08/2005	17.3	17.7	18.5	18.5	17.8	17.5	17.2	14.9
1759	02/08/2005	18	18.9	18.7	18.6	18.2	18	17.6	15.3
2359	02/08/2005	16.9	17.9	18.3	18.2	17.9	17.6	17.4	14.9
559	03/08/2005	15.7	16.7	18	18.3	18.1	17.9	17.6	15.1
1159	03/08/2005	16.1	16.4	17.8	18.3	18.3	18.2	17.9	15.3
1759	03/08/2005	19.6	19.2	17.8	17.9	18.1	18	17.8	15.2
2359	03/08/2005	19	19	18	17.5	17.5	17.5	17.3	14.8
559	04/08/2005	16.8	17.4	18.3	18.3	18.1	18.1	17.9	15.4
1159	04/08/2005	18.2	16.9	17.8	18.2	18.1	18	17.8	15.2
1759	04/08/2005	21.4	19.7	17.3	17	17.1	17	16.9	14.4
2359	04/08/2005	20.7	19.5	18.5	17.8	17.5	17.5	17.3	14.8
559	05/08/2005	19.1	18.3	18.8	18.6	18.1	18	17.9	15.4
1159	05/08/2005	20.2	18.1	18.6	18.8	18.5	18.3	18.1	15.5
1759	05/08/2005	21.9	19.6	18.7	18.5	18.3	18.1	17.9	15.3
2359	05/08/2005	20.7	18.8	18.3	17.9	17.6	17.5	17.3	14.8
559	06/08/2005	18.4	16.9	18	18.1	17.8	17.7	17.5	14.9
1159	06/08/2005	20	17.2	18.3	18.8	18.7	18.6	18.3	15.6
1759	06/08/2005	23.2	20.4	18.5	18.4	18.4	18.3	18.1	15.5
2359	06/08/2005	21.8	19.9	18.6	17.9	17.7	17.7	17.5	14.9
559	07/08/2005	19.7	18.3	18.5	18.1	17.8	17.7	17.5	15
1159	07/08/2005	19	17.5	18.2	18.3	18	17.9	17.7	15.2
1759	07/08/2005	20	18.3	17.9	17.9	17.8	17.6	17.4	14.9
2359	07/08/2005	19.3	18.3	18.3	18.2	18	18	17.8	15.2
559	08/08/2005	17.9	17.2	18.3	18.5	18.4	18.3	18.2	15.6
1159	08/08/2005	17.4	16.2	17.6	18.2	18.3	18.2	17.9	15.4
1759	08/08/2005	20.5	18.8	18	18.2	18.4	18.3	18.1	15.6
2359	08/08/2005	19.2	18.2	18.1	17.9	18	18	17.8	15.3
559	09/08/2005	17.3	16.5	17.7	17.9	17.9	17.9	17.8	15.3
1159	09/08/2005	18.1	15.9	17.5	18.2	18.3	18.2	18.1	15.6
1759	09/08/2005	20.6	17.9	17.3	17.6	17.9	17.9	17.8	15.3
2359	09/08/2005	19	17.6	17.5	17.4	17.5	17.6	17.5	15.1
559	10/08/2005	17.2	16.3	17.7	18	18	18.1	18	15.6
1159	10/08/2005	17.7	15.8	17.1	17.8	17.9	17.9	17.8	15.4
1759	10/08/2005	20.3	18.8	17.3	17.3	17.5	17.6	17.5	15.2
2359	10/08/2005	18.5	18.3	18.1	17.8	17.8	17.9	17.8	15.5
559	11/08/2005	16.8	16.7	17.7	17.8	17.7	17.8	17.7	15.5
1159	11/08/2005	16	15.7	17.1	17.7	17.7	17.7	17.6	15.4
1759	11/08/2005	16.5	15.6	16.6	17.3	17.5	17.5	17.4	15.2
2359	11/08/2005	16	15.5	16.7	17.3	17.7	17.8	17.7	15.5
559	12/08/2005	14.3	14.3	16.3	17.2	17.6	17.7	17.7	15.6
1159	12/08/2005	14.8	13.2	15.1	16.3	16.9	17	17	14.9
1759	12/08/2005	17.7	16.2	15.8	16.4	17.1	17.3	17.3	15.3
2359	12/08/2005	16.7	16.4	16.5	16.7	17.2	17.4	17.5	15.5
559	13/08/2005	15.1	15	16.3	16.8	17.2	17.4	17.4	15.6
1159	13/08/2005	15.6	14.5	15.7	16.4	16.8	17	17.1	15.2
1759	13/08/2005	17.6	16	15.8	16.2	16.7	16.9	17	15.2
2359	13/08/2005	16.6	16.1	16.3	16.4	16.8	17	17.1	15.4
559	14/08/2005	15	15	16.3	16.7	17	17.1	17.2	15.6
1159	14/08/2005	15	14.5	16.1	16.8	17.2	17.3	17.4	15.8
1759	14/08/2005	16.5	15.2	15.5	16.1	16.5	16.7	16.8	15.3
2359	14/08/2005	15	14.7	15.6	16	16.4	16.7	16.8	15.3
559	15/08/2005	12.9	13.3	15.7	16.6	17	17.2	17.3	15.9
1159	15/08/2005	13.3	12.8	14.8	16	16.6	16.9	16.9	15.6
1759	15/08/2005	15	14.2	14.4	15.2	16	16.3	16.4	15.1
2359	15/08/2005	14.7	14.5	15	15.5	16.1	16.5	16.6	15.5
559	16/08/2005	13.4	13.7	15.1	15.7	16.3	16.6	16.8	15.7
1159	16/08/2005	13.9	13.5	14.9	15.8	16.4	16.7	16.9	15.8
1759	16/08/2005	15.1	14.7	14.8	15.4	16	16.3	16.5	15.6
2359	16/08/2005	14.4	14.5	15	15.3	15.9	16.2	16.4	15.5
559	17/08/2005	13.6	13.8	15	15.5	16	16.3	16.5	15.7
1159	17/08/2005	13.6	13.7	15.1	15.9	16.4	16.6	16.8	16
1759	17/08/2005	14	13.7	14.4	15	15.6	15.9	16.1	15.4
2359	17/08/2005	13.1	13.7	14.6	15.2	15.7	16	16.3	15.6

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
559	18/08/2005	12.4	13	14.3	15.1	15.6	15.9	16.2	15.6
1159	18/08/2005	12.4	12.7	14	14.9	15.6	15.9	16.1	15.6
1759	18/08/2005	13	13.2	13.9	14.7	15.4	15.7	16	15.5
2359	18/08/2005	12.5	13	13.9	14.6	15.3	15.6	15.9	15.5
559	19/08/2005	12	12.4	13.8	14.5	15.2	15.5	15.9	15.6
1159	19/08/2005	12.6	12.5	13.7	14.5	15.2	15.6	15.9	15.6
1759	19/08/2005	13.6	13.3	13.6	14.3	15	15.4	15.7	15.5
2359	19/08/2005	13	13.3	13.6	14	14.6	15	15.3	15.3
559	20/08/2005	11.6	12.4	13.8	14.3	14.9	15.3	15.6	15.6
1159	20/08/2005	12.7	12.5	13.7	14.6	15.3	15.5	15.9	15.9
1759	20/08/2005	15	14.3	13.5	13.9	14.5	14.9	15.2	15.3
2359	20/08/2005	14.6	14.6	14	14	14.4	14.7	15	15.3
559	21/08/2005	13.7	14	14.3	14.3	14.6	14.8	15.2	15.5
1159	21/08/2005	15	14.6	15	15.3	15.5	15.7	16	16.2
1759	21/08/2005	17.8	16.5	14.1	13.8	13.9	14.1	14.4	14.8
2359	21/08/2005	16.7	17.1	15.5	14.7	14.5	14.7	15	15.4
559	22/08/2005	15.3	15.8	15.5	15	14.6	14.7	14.9	15.3
1159	22/08/2005	15.7	15.3	15.5	15.4	15.1	15.1	15.3	15.6
1759	22/08/2005	17.8	16.7	15.4	15	14.8	14.7	14.8	15.1
2359	22/08/2005	16.7	16.7	15.9	15.3	14.9	14.9	15	15.3
559	23/08/2005	14.9	15.3	15.7	15.4	15	15	15.1	15.3
1159	23/08/2005	15.5	14.7	15.3	15.6	15.3	15.2	15.3	15.4
1759	23/08/2005	17.8	16.5	14.9	14.6	14.5	14.5	14.5	14.6
2359	23/08/2005	16.2	16.3	15.9	15.4	15.1	15.1	15.1	15.2
559	24/08/2005	14.4	14.5	15.6	15.5	15.2	15.1	15.2	15.2
1159	24/08/2005	15.1	14.2	15.4	15.9	15.8	15.7	15.7	15.6
1759	24/08/2005	17	16.6	15	15.1	15.1	15.1	15.1	14.9
2359	24/08/2005	16	16.7	15.9	15.4	15.2	15.3	15.3	15.2
559	25/08/2005	13.9	14.6	15.7	15.7	15.5	15.5	15.5	15.4
1159	25/08/2005	14.8	13.7	15.3	15.9	15.9	15.8	15.8	15.5
1759	25/08/2005	18.2	17.2	15	15	15.1	15.1	15.1	14.9
2359	25/08/2005	17.1	17.2	15.8	15	14.9	14.9	15	14.7
559	26/08/2005	14.9	15.2	16	15.7	15.4	15.4	15.4	15.2
1159	26/08/2005	15.8	14.6	15.8	16.2	16.1	16	16	15.6
1759	26/08/2005	19.8	18.6	15.8	15.5	15.5	15.4	15.4	15
2359	26/08/2005	19.2	18.9	16.7	15.5	15.1	15.1	15.1	14.8
559	27/08/2005	17.2	17.1	16.9	16.2	15.6	15.5	15.5	15.1
1159	27/08/2005	18.2	16.3	16.8	16.8	16.3	16.1	16	15.4
1759	27/08/2005	21.6	20.2	16.9	16.1	15.6	15.5	15.3	14.8
2359	27/08/2005	20.7	20.3	17.9	16.4	15.7	15.5	15.4	14.9
559	28/08/2005	18.2	18	18	17.2	16.2	16	15.8	15.2
1159	28/08/2005	19.2	17.4	17.9	17.7	17	16.6	16.4	15.6
1759	28/08/2005	22.4	20.5	17.6	16.8	16.2	15.9	15.7	14.9
2359	28/08/2005	21.3	20.4	18.3	16.9	16.1	15.8	15.6	14.7
559	29/08/2005	19.4	18.8	18.4	17.5	16.5	16.2	15.9	15
1159	29/08/2005	19.1	17.8	18	17.6	16.8	16.4	16.1	15.1
1759	29/08/2005	19	18.4	18	17.7	17.1	16.7	16.4	15.2
2359	29/08/2005	16.9	16.8	17.7	17.6	17	16.7	16.5	15.2
559	30/08/2005	14.3	15	17	17.5	17.2	16.9	16.6	15.2
1159	30/08/2005	13.9	14.1	16.3	17.2	17.2	17.1	16.7	15.3
1759	30/08/2005	15.4	15	15.7	16.5	16.8	16.8	16.5	15
2359	30/08/2005	14.4	14.7	15.6	16.1	16.6	16.6	16.4	15
559	31/08/2005	13	13.3	15.3	16.1	16.5	16.6	16.5	15
1159	31/08/2005	14.1	13.3	15.2	16.3	16.9	17	16.9	15.4
1759	31/08/2005	16.3	15.2	14.4	14.9	15.6	15.7	15.7	14.4
2359	31/08/2005	14.9	15.2	15.6	15.7	16.2	16.4	16.4	15.1
559	01/09/2005	12.9	13.4	15.2	15.8	16.2	16.4	16.5	15.2
1159	01/09/2005	13.7	12.9	14.7	15.9	16.4	16.6	16.6	15.4
1759	01/09/2005	17.1	15.8	14.4	14.8	15.4	15.6	15.7	14.6
2359	01/09/2005	15.3	15.5	15.4	15.3	15.7	15.9	16	15.1
559	02/09/2005	13.6	14	15.5	15.9	16.2	16.4	16.5	15.5
1159	02/09/2005	12.9	13.1	15	15.9	16.2	16.4	16.4	15.5
1759	02/09/2005	15.3	14.8	14.8	15.5	16	16.2	16.3	15.4
2359	02/09/2005	15	14.9	14.8	15	15.5	15.7	15.9	15.1
559	03/09/2005	13.4	13.7	14.8	15.2	15.6	15.8	15.9	15.2
1159	03/09/2005	14.4	13.5	14.7	15.5	15.9	16	16.2	15.5
1759	03/09/2005	16.8	15.7	14.5	14.7	15.1	15.3	15.5	14.9
2359	03/09/2005	15.1	15.4	15.1	14.9	15.1	15.3	15.5	15
559	04/09/2005	13.2	13.9	15.1	15.3	15.5	15.6	15.8	15.3
1159	04/09/2005	13.4	12.9	14.6	15.4	15.7	15.8	15.9	15.4
1759	04/09/2005	16.9	16.1	14.7	14.9	15.3	15.5	15.6	15.2
2359	04/09/2005	15.6	15.8	15.1	14.7	14.9	15.1	15.3	15
559	05/09/2005	13.4	13.9	15.1	15.2	15.3	15.4	15.6	15.2

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	05/09/2005	14.4	13.2	14.9	15.7	15.9	16	16.1	15.7
1759	05/09/2005	17.2	16	14.6	14.8	15.1	15.2	15.4	15
2359	05/09/2005	16	15.7	15.2	14.9	15	15.2	15.3	15.1
559	06/09/2005	13.8	14.1	15.1	15.2	15.3	15.4	15.5	15.3
1159	06/09/2005	14.5	13.1	14.8	15.5	15.6	15.7	15.8	15.5
1759	06/09/2005	18	15.9	14.1	14.1	14.4	14.5	14.6	14.4
2359	06/09/2005	16.9	16.5	15.5	15	15	15.1	15.3	15.1
559	07/09/2005	14.3	14.3	15.3	15.3	15.1	15.2	15.3	15.1
1159	07/09/2005	15.2	13.7	15.3	15.9	15.9	15.9	15.9	15.7
1759	07/09/2005	17.7	16	14.7	14.8	14.9	15	15	14.8
2359	07/09/2005	16.7	16.1	15.4	14.9	14.9	15	15.1	14.9
559	08/09/2005	15.1	14.7	15.4	15.4	15.3	15.3	15.4	15.1
1159	08/09/2005	15.3	14.5	15.5	15.8	15.7	15.7	15.7	15.4
1759	08/09/2005	17.5	15.5	14.5	14.4	14.5	14.5	14.6	14.4
2359	08/09/2005	16.5	16	15.6	15.2	15.2	15.2	15.3	15.1
559	09/09/2005	14.6	14.3	15.6	15.7	15.6	15.6	15.7	15.4
1159	09/09/2005	15.2	13.7	15.1	15.8	15.8	15.8	15.8	15.5
1759	09/09/2005	17.2	15.3	14.6	14.7	14.9	15	15	14.7
2359	09/09/2005	16.2	15.4	15.2	15.1	15.1	15.2	15.3	15
559	10/09/2005	14.6	14	15.2	15.4	15.4	15.5	15.5	15.2
1159	10/09/2005	14.5	13.6	14.9	15.4	15.6	15.6	15.7	15.3
1759	10/09/2005	15.9	14.3	14.2	14.5	14.8	14.8	14.9	14.6
2359	10/09/2005	15.3	14.7	14.9	15	15.2	15.3	15.4	15.1
559	11/09/2005	14	13.7	14.9	15.3	15.4	15.6	15.6	15.4
1159	11/09/2005	14.6	13.5	15.2	15.9	16.2	16.3	16.3	16
1759	11/09/2005	16.6	14.8	14	14.4	14.7	14.9	14.9	14.7
2359	11/09/2005	15.4	14.8	14.8	14.8	15	15.2	15.3	15.1
559	12/09/2005	13.6	13.1	14.6	15	15.2	15.3	15.4	15.2
1159	12/09/2005	13.5	12.9	14.5	15.3	15.5	15.6	15.7	15.5
1759	12/09/2005	13.9	13.4	13.7	14.3	14.8	14.9	15.1	14.9
2359	12/09/2005	12.9	12.7	14	14.5	14.9	15.1	15.3	15.1
559	13/09/2005	11.3	11.4	13.6	14.4	14.9	15.1	15.3	15.2
1159	13/09/2005	11.6	10.4	13	14.4	15	15.3	15.4	15.3
1759	13/09/2005	15.2	12.8	12.6	13.4	14.2	14.5	14.6	14.6
2359	13/09/2005	13.5	12.9	13.5	13.8	14.4	14.8	15	15.1
559	14/09/2005	11.5	11.2	13.2	14	14.5	14.8	15	15.2
1159	14/09/2005	11.4	10.9	13.4	14.6	15.2	15.5	15.7	15.8
1759	14/09/2005	13.1	11.7	12.2	13.2	14	14.3	14.6	14.8
2359	14/09/2005	11.9	11.1	12.3	13	13.7	14.1	14.4	14.7
559	15/09/2005	9.9	9.8	12.3	13.3	14	14.4	14.7	15.1
1159	15/09/2005	10	9	12	13.5	14.4	14.7	15	15.4
1759	15/09/2005	13.4	11.4	11.3	12.3	13.3	13.7	14	14.5
2359	15/09/2005	12.4	11.7	12.2	12.7	13.5	13.9	14.3	15
559	16/09/2005	10.5	10.3	12.2	13.1	13.7	14.1	14.5	15.2
1159	16/09/2005	10.6	9.9	11.9	13	13.8	14.1	14.5	15.3
1759	16/09/2005	12.4	11.5	11.6	12.4	13.2	13.6	14	14.8
2359	16/09/2005	11.7	11.5	12	12.5	13.1	13.5	14	14.9
559	17/09/2005	10.4	10.6	11.9	12.5	13.1	13.5	13.9	15
1159	17/09/2005	11.3	10.2	12	13	13.6	13.9	14.3	15.3
1759	17/09/2005	15.2	12.9	11.6	12	12.6	13	13.4	14.5
2359	17/09/2005	14.1	13.4	12.8	12.6	13	13.4	13.8	15
559	18/09/2005	12.6	12.2	12.7	12.8	13	13.3	13.7	15
1159	18/09/2005	12.9	11.9	12.8	13.2	13.5	13.7	14	15.3
1759	18/09/2005	16.8	14.2	12.4	12.4	12.6	12.9	13.2	14.5
2359	18/09/2005	15.1	14.3	13.4	13	13	13.2	13.6	14.9
559	19/09/2005	13.3	12.8	13.4	13.4	13.3	13.4	13.7	15
1159	19/09/2005	12.9	12.2	13	13.3	13.3	13.4	13.7	15
1759	19/09/2005	14.8	13.6	12.9	13.1	13.2	13.4	13.6	14.9
2359	19/09/2005	13.6	13.1	13.2	13.1	13.2	13.3	13.6	14.9
559	20/09/2005	12.2	11.8	12.9	13.2	13.2	13.4	13.6	14.8
1159	20/09/2005	12.4	11.7	13	13.6	13.7	13.8	14	15.2
1759	20/09/2005	14	12.9	12.6	12.9	13.2	13.4	13.6	14.8
2359	20/09/2005	12.6	12.3	12.8	13	13.3	13.5	13.7	14.9
559	21/09/2005	11.2	11.2	12.6	13.1	13.3	13.5	13.8	14.9
1159	21/09/2005	11	10.7	12.5	13.3	13.6	13.8	14	15.2
1759	21/09/2005	12.7	11.7	11.6	12.2	12.8	13	13.2	14.3
2359	21/09/2005	12.2	12.1	12.4	12.6	13.1	13.3	13.6	14.8
559	22/09/2005	11	11.1	12.3	12.8	13.2	13.4	13.7	14.9
1159	22/09/2005	11	10.6	12.4	13.2	13.6	13.8	14.1	15.2
1759	22/09/2005	13.3	11.8	11.6	12.1	12.6	12.9	13.2	14.4
2359	22/09/2005	12.2	12	12.2	12.5	13	13.3	13.6	14.8
559	23/09/2005	10	10.2	12	12.5	12.9	13.2	13.5	14.8
1159	23/09/2005	9.9	9.3	11.7	12.8	13.3	13.5	13.8	15.1

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1759	23/09/2005	12.4	11.3	11.3	12.1	12.8	13.1	13.4	14.8
2359	23/09/2005	11	10.9	11.7	12.1	12.7	13	13.4	14.8
559	24/09/2005	9.9	9.9	11.4	12.1	12.7	13	13.3	14.7
1159	24/09/2005	10.4	9.4	11	12	12.7	13	13.3	14.7
1759	24/09/2005	12.8	11.4	11.1	11.6	12.3	12.6	13	14.5
2359	24/09/2005	11.8	11.5	11.6	11.9	12.4	12.7	13.1	14.6
559	25/09/2005	10.9	10.8	11.5	11.9	12.3	12.6	13	14.6
1159	25/09/2005	11.4	10.9	11.9	12.5	12.9	13.1	13.5	15.1
1759	25/09/2005	12.3	11.2	11.1	11.5	12	12.3	12.6	14.3
2359	25/09/2005	11.4	11	11.3	11.5	11.9	12.2	12.6	14.3
559	26/09/2005	9.6	9.6	11.3	11.9	12.3	12.6	13	14.7
1159	26/09/2005	9.8	8.5	10.8	11.8	12.3	12.6	12.9	14.6
1759	26/09/2005	12.4	10.8	10.6	11.2	11.9	12.2	12.6	14.3
2359	26/09/2005	11.3	10.8	11.2	11.5	12	12.4	12.8	14.5
559	27/09/2005	9.4	9.4	10.9	11.4	11.9	12.3	12.7	14.5
1159	27/09/2005	9.1	8.2	10.6	11.7	12.3	12.6	13	14.8
1759	27/09/2005	12.2	10.1	10	10.8	11.5	11.8	12.2	14
2359	27/09/2005	10.8	10.2	10.6	11	11.6	12	12.4	14.3
559	28/09/2005	8.4	8.5	10.6	11.3	11.9	12.2	12.7	14.6
1159	28/09/2005	8	7.8	10.6	11.8	12.4	12.7	13.1	15
1759	28/09/2005	9.2	8.7	9.8	10.9	11.8	12.1	12.5	14.5
2359	28/09/2005	9.5	9.2	9.8	10.6	11.4	11.8	12.3	14.3
559	29/09/2005	9.2	9	9.8	10.5	11.3	11.7	12.2	14.3
1159	29/09/2005	9.9	8.9	10	10.8	11.5	11.9	12.4	14.5
1759	29/09/2005	12.5	11	9.8	10.1	10.7	11.1	11.6	13.8
2359	29/09/2005	10.8	10.9	10.8	10.7	11.2	11.6	12.1	14.3
559	30/09/2005	9.4	9.4	10.6	11	11.3	11.6	12.1	14.4
1159	30/09/2005	9.3	9.1	10.6	11.2	11.6	11.9	12.3	14.6
1759	30/09/2005	10.3	9.2	9.7	10.2	10.8	11	11.5	13.8
2359	30/09/2005	9	9	10.1	10.5	11.1	11.4	11.8	14.2
559	01/10/2005	7.1	7.3	9.8	10.7	11.2	11.6	12	14.4
1159	01/10/2005	6.9	6.5	9.5	10.8	11.6	11.9	12.3	14.7
1759	01/10/2005	9.1	8	8.7	9.9	10.8	11.2	11.7	14.1
2359	01/10/2005	8.1	7.9	9.2	10	10.9	11.3	11.8	14.3
559	02/10/2005	7	7	9	10	10.8	11.3	11.8	14.3
1159	02/10/2005	6.8	6.7	9	10.2	11.1	11.5	12	14.6
1759	02/10/2005	8.1	7.2	8.3	9.4	10.3	10.8	11.4	14
2359	02/10/2005	6.6	6.5	8.2	9.1	10	10.5	11.1	13.8
559	03/10/2005	4.7	5.5	8.1	9.3	10.3	10.8	11.4	14.2
1159	03/10/2005	4.1	4.9	7.9	9.5	10.6	11.1	11.7	14.4
1759	03/10/2005	7	5	6.8	8.3	9.5	10.1	10.6	13.6
2359	03/10/2005	6.1	5.7	7.4	8.6	9.7	10.4	11	14
559	04/10/2005	4.4	4.7	7.1	8.4	9.6	10.2	10.9	14
1159	04/10/2005	4.7	4.6	7.3	8.9	10.1	10.7	11.3	14.4
1759	04/10/2005	7.9	5.8	6.3	7.6	8.8	9.5	10.1	13.4
2359	04/10/2005	7	6.6	7.2	8	9.1	9.7	10.5	13.9
559	05/10/2005	5.7	5.8	7.4	8.3	9.2	9.8	10.6	14
1159	05/10/2005	5.7	5.3	7.3	8.5	9.4	10	10.7	14.2
1759	05/10/2005	8.2	6.9	6.7	7.6	8.5	9.1	9.8	13.4
2359	05/10/2005	7.2	7.2	7.6	8.1	8.9	9.4	10.2	13.9
559	06/10/2005	5.9	6.1	7.5	8.2	8.9	9.4	10.2	13.9
1159	06/10/2005	5.9	5.7	7.5	8.4	9.2	9.7	10.4	14.2
1759	06/10/2005	8.7	7.3	6.8	7.4	8.2	8.7	9.4	13.2
2359	06/10/2005	8	8	7.8	8	8.7	9.2	9.9	13.8
559	07/10/2005	6.9	7	7.7	8	8.5	9	9.7	13.6
1159	07/10/2005	7.1	7.2	8.4	9	9.5	9.8	10.5	14.3
1759	07/10/2005	8.9	8.2	7.5	7.9	8.5	8.9	9.5	13.5
2359	07/10/2005	8.6	8.6	8.2	8.2	8.7	9.1	9.7	13.7
559	08/10/2005	8	8.1	8.3	8.4	8.7	9.1	9.7	13.7
1159	08/10/2005	8	7.9	8.5	8.8	9.1	9.4	10	13.9
1759	08/10/2005	9.4	8.2	7.4	7.5	7.8	8.2	8.7	12.7
2359	08/10/2005	7.8	8.2	8.4	8.4	8.6	8.9	9.5	13.5
559	09/10/2005	5.9	6.5	8.3	8.7	8.9	9.2	9.8	13.7
1159	09/10/2005	6	5.9	7.9	8.9	9.3	9.6	10.1	13.9
1759	09/10/2005	9	7.2	6.7	7.2	7.8	8.1	8.6	12.5
2359	09/10/2005	8.4	8.3	8.2	8.3	8.8	9.2	9.7	13.6
559	10/10/2005	7.8	7.8	8.4	8.6	9	9.3	9.9	13.7
1159	10/10/2005	7.6	7.2	8	8.4	8.8	9.1	9.6	13.4
1759	10/10/2005	8.6	8.1	7.8	8.1	8.5	8.9	9.4	13.2
2359	10/10/2005	8.4	8.1	8	8.1	8.4	8.7	9.3	13.1
559	11/10/2005	7.9	7.9	8.1	8.3	8.5	8.9	9.4	13.2
1159	11/10/2005	7.6	7.3	8.3	8.7	9	9.3	9.7	13.5
1759	11/10/2005	9.9	8.5	7.6	7.8	8.1	8.4	8.9	12.7

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
2359	11/10/2005	8.6	8.6	8.5	8.5	8.7	9	9.5	13.3
559	12/10/2005	6.8	7	8.3	8.6	8.8	9	9.5	13.3
1159	12/10/2005	6.6	6.4	8.2	8.9	9.2	9.4	9.8	13.5
1759	12/10/2005	7.9	6.9	7.1	7.7	8.2	8.4	8.9	12.6
2359	12/10/2005	7.9	7.7	8	8.3	8.8	9.1	9.5	13.2
559	13/10/2005	7.7	7.5	7.8	8.2	8.6	8.9	9.4	13.1
1159	13/10/2005	7.8	7.6	8.5	8.9	9.3	9.6	10.1	13.7
1759	13/10/2005	8.9	7.6	7.1	7.4	7.8	8.1	8.6	12.2
2359	13/10/2005	7.9	8	8	8.1	8.4	8.7	9.2	12.9
559	14/10/2005	6.4	6.7	8	8.3	8.6	8.9	9.4	13.1
1159	14/10/2005	6.3	5.9	7.7	8.6	9	9.2	9.7	13.3
1759	14/10/2005	9	6.8	6.3	6.8	7.4	7.7	8.1	11.8
2359	14/10/2005	7.6	7.6	7.8	8	8.5	8.8	9.3	13
559	15/10/2005	6.6	6.5	7.8	8.3	8.7	9	9.5	13.1
1159	15/10/2005	6.7	6.4	7.7	8.3	8.8	9.1	9.5	13.1
1759	15/10/2005	7.5	6.9	7.2	7.7	8.3	8.6	9.1	12.7
2359	15/10/2005	7.7	7.4	7.5	7.8	8.3	8.6	9.1	12.8
559	16/10/2005	7	7.1	7.7	8	8.4	8.7	9.2	12.9
1159	16/10/2005	6.5	6.5	7.7	8.1	8.6	8.9	9.3	13
1759	16/10/2005	6.9	6.4	6.8	7.3	7.8	8.1	8.5	12.2
2359	16/10/2005	5.7	6.1	7.2	7.7	8.2	8.5	9	12.7
559	17/10/2005	4.8	5	7	7.9	8.4	8.7	9.2	12.9
1159	17/10/2005	4.9	4.8	7	8	8.6	9	9.4	13.1
1759	17/10/2005	5.8	5.2	6.1	7	7.8	8.2	8.7	12.4
2359	17/10/2005	5	5.1	6.5	7.3	8.1	8.5	9.1	12.8
559	18/10/2005	3.8	4.2	6.2	7.1	7.9	8.4	8.9	12.7
1159	18/10/2005	3.4	3.7	6	7.2	8.1	8.5	9.1	12.8
1759	18/10/2005	5.8	4.1	5	6.1	7.1	7.6	8.1	12
2359	18/10/2005	5.4	4.9	5.8	6.6	7.5	8.1	8.7	12.6
559	19/10/2005	4.6	4.7	6	6.8	7.7	8.2	8.8	12.8
1159	19/10/2005	4.8	4.6	6.4	7.4	8.2	8.7	9.3	13.3
1759	19/10/2005	5.6	5	5.4	6.2	7.1	7.6	8.2	12.3
2359	19/10/2005	5.6	5.6	6	6.5	7.3	7.8	8.4	12.5
559	20/10/2005	4.9	5	5.8	6.3	7	7.5	8.2	12.4
1159	20/10/2005	4.7	4.8	6.3	7	7.7	8.1	8.7	12.8
1759	20/10/2005	5.3	5	5.6	6.2	6.9	7.4	8	12.3
2359	20/10/2005	4.4	4.8	5.8	6.4	7.1	7.6	8.2	12.5
559	21/10/2005	3	3.7	5.5	6.3	7	7.4	8.1	12.4
1159	21/10/2005	2.9	3.3	5.5	6.6	7.4	7.8	8.5	12.7
1759	21/10/2005	4.8	2.3	3.8	4.8	5.8	6.2	6.9	11.2
2359	21/10/2005	3.4	3.1	4.6	5.5	6.5	7	7.7	12.1
559	22/10/2005	2.3	2.9	4.8	5.8	6.8	7.3	8	12.4
1159	22/10/2005	2.7	3.2	5.3	6.5	7.5	8	8.7	13.1
1759	22/10/2005	3.8	2	3.8	4.9	5.9	6.5	7.2	11.7
2359	22/10/2005	3.5	2.8	4.2	5.2	6.2	6.8	7.6	12.2
559	23/10/2005	2.8	2.6	4.1	5.2	6.2	6.7	7.5	12.2
1159	23/10/2005	3.1	2.8	4.5	5.6	6.6	7.1	7.9	12.5
1759	23/10/2005	5.4	3.8	3.8	4.7	5.6	6.2	7	11.8
2359	23/10/2005	4.9	4.5	4.5	5	5.8	6.4	7.2	12.1
559	24/10/2005	4.3	4.2	4.7	5.1	5.8	6.4	7.2	12.1
1159	24/10/2005	4.1	4	5.1	5.7	6.2	6.7	7.5	12.4
1759	24/10/2005	5.2	4	3.8	4.2	4.8	5.3	6	11
2359	24/10/2005	4.9	4.8	4.8	5.1	5.6	6.1	6.8	11.9
559	25/10/2005	4	4.2	4.9	5.3	5.7	6.2	6.9	11.9
1159	25/10/2005	4.5	4.2	5.5	6.1	6.6	6.9	7.6	12.6
1759	25/10/2005	6.7	4.8	4.1	4.4	5	5.4	6	11.1
2359	25/10/2005	6.7	5.7	5	5	5.4	5.8	6.5	11.6
559	26/10/2005	6	5.5	5.5	5.5	5.8	6.2	6.8	11.9
1159	26/10/2005	5.9	5.2	5.5	5.8	6	6.3	7	12
1759	26/10/2005	7.8	6.3	5.3	5.3	5.6	5.9	6.5	11.5
2359	26/10/2005	6.7	6.3	5.7	5.5	5.7	6	6.6	11.6
559	27/10/2005	5.3	5.2	5.7	5.7	5.8	6.1	6.7	11.6
1159	27/10/2005	4.7	4.4	5.8	6.3	6.4	6.7	7.2	12.1
1759	27/10/2005	6.2	4.1	4.2	4.5	4.9	5.2	5.6	10.6
2359	27/10/2005	4.8	4.5	5.2	5.5	5.8	6.1	6.7	11.5
559	28/10/2005	3.2	3.6	5.1	5.7	6.1	6.4	7	11.8
1159	28/10/2005	2.8	3.1	4.9	5.8	6.3	6.6	7.1	11.9
1759	28/10/2005	4.8	2.4	3.5	4.3	5	5.3	5.8	10.6
2359	28/10/2005	3.7	2.9	4.1	4.8	5.5	5.9	6.5	11.3
559	29/10/2005	3.2	3.1	4.8	5.6	6.3	6.7	7.3	12
1159	29/10/2005	2.9	2.8	4.5	5.4	6.2	6.6	7.2	11.9
1759	29/10/2005	4.5	2.8	3.2	4	4.8	5.3	5.9	10.7
2359	29/10/2005	3.9	3.4	4.2	4.7	5.5	6	6.6	11.4

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
559	30/10/2005	3	2.9	4.2	4.9	5.6	6.1	6.8	11.6
1159	30/10/2005	2.9	2.5	4.1	4.9	5.6	6.1	6.7	11.5
1759	30/10/2005	4.1	2.8	3.3	4	4.8	5.2	5.9	10.8
2359	30/10/2005	3.5	3.2	3.9	4.4	5.1	5.6	6.3	11.2
559	31/10/2005	2.2	2.4	3.8	4.4	5.1	5.6	6.2	11.2
1159	31/10/2005	2	2.5	4	5	5.7	6.1	6.7	11.6
1759	31/10/2005	3.5	1.5	3	3.8	4.6	5	5.7	10.7
2359	31/10/2005	2.7	2.4	3.9	4.8	5.6	6	6.7	11.7
559	01/11/2005	2.2	2	3.5	4.3	5.2	5.6	6.3	11.4
1159	01/11/2005	2.1	2.1	3.5	4.4	5.2	5.7	6.4	11.5
1759	01/11/2005	2.3	2	3.3	4.2	5	5.5	6.2	11.4
2359	01/11/2005	2.2	2.1	3.4	4.2	5	5.5	6.3	11.4
559	02/11/2005	2	1.9	3.2	4	4.8	5.3	6.1	11.3
1159	02/11/2005	2.1	2.1	3.4	4.2	5	5.5	6.2	11.4
1759	02/11/2005	3.1	2.5	3.1	3.8	4.6	5.1	5.8	11.1
2359	02/11/2005	2.9	2.7	3.2	3.7	4.5	5	5.7	11.1
559	03/11/2005	2.4	2.5	3.3	3.9	4.6	5.1	5.8	11.2
1159	03/11/2005	2.1	2.1	3.3	3.9	4.6	5	5.8	11.2
1759	03/11/2005	2.2	2.2	3.2	3.9	4.6	5	5.7	11.2
2359	03/11/2005	2.3	2.2	3.1	3.8	4.5	4.9	5.7	11.1
559	04/11/2005	2.3	2.3	3.2	3.8	4.5	4.9	5.7	11.1
1159	04/11/2005	2.5	2.4	3.2	3.9	4.5	5	5.7	11.1
1759	04/11/2005	2.5	2.4	3.1	3.6	4.3	4.7	5.5	11
2359	04/11/2005	2.4	2.4	3.1	3.7	4.3	4.8	5.5	11
559	05/11/2005	2.3	2.3	3.2	3.7	4.3	4.8	5.5	11
1159	05/11/2005	2.1	2.1	3.2	3.7	4.4	4.8	5.5	11
1759	05/11/2005	2.2	2.1	3	3.5	4.2	4.6	5.3	10.9
2359	05/11/2005	2	2	3	3.6	4.2	4.6	5.4	10.9
559	06/11/2005	1.7	1.8	2.9	3.5	4.2	4.6	5.3	10.9
1159	06/11/2005	1.7	1.9	3	3.6	4.3	4.7	5.4	11
1759	06/11/2005	1.9	1.6	2.4	3	3.7	4.2	4.9	10.5
2359	06/11/2005	1.5	1.8	2.7	3.3	4	4.5	5.2	10.8
559	07/11/2005	1.6	1.8	2.9	3.6	4.3	4.7	5.4	11
1159	07/11/2005	1.5	1.7	2.9	3.6	4.3	4.7	5.4	11
1759	07/11/2005	1.3	1.3	2.4	3.1	3.8	4.3	5	10.6
2359	07/11/2005	1.2	1	2	2.6	3.4	3.9	4.6	10.3
559	08/11/2005	1.2	1.4	2.4	3.1	3.8	4.3	5.1	10.7
1159	08/11/2005	1.3	1.4	2.6	3.2	4	4.4	5.1	10.8
1759	08/11/2005	0.9	0.7	1.7	2.3	3.1	3.6	4.3	10.1
2359	08/11/2005	0.9	0.9	1.9	2.6	3.3	3.8	4.6	10.3
559	09/11/2005	1	1.2	2.2	2.9	3.7	4.2	4.9	10.7
1159	09/11/2005	1.1	1.1	2.4	3.1	3.8	4.2	5	10.7
1759	09/11/2005	0.8	0.9	2	2.8	3.5	4	4.7	10.5
2359	09/11/2005	0.8	0.9	1.9	2.6	3.4	3.9	4.7	10.5
559	10/11/2005	1.1	1.1	2.2	2.9	3.7	4.2	4.9	10.7
1159	10/11/2005	1	0.9	2	2.8	3.5	4	4.7	10.6
1759	10/11/2005	1.1	0.2	1.3	2	2.7	3.2	4	9.9
2359	10/11/2005	1.8	0.5	1.5	2.1	2.9	3.4	4.2	10.1
559	11/11/2005	1.5	0.8	1.8	2.5	3.2	3.7	4.5	10.4
1159	11/11/2005	1.2	0.9	1.8	2.5	3.2	3.7	4.5	10.4
1759	11/11/2005	1.3	0.1	1	1.6	2.3	2.8	3.6	9.6
2359	11/11/2005	0.9	0.6	1.4	2	2.7	3.2	4	10
559	12/11/2005	0.6	0.5	1.3	1.9	2.6	3.1	3.9	10
1159	12/11/2005	0.7	0.7	1.7	2.3	3	3.5	4.3	10.3
1759	12/11/2005	0.3	-0.2	0.8	1.4	2.1	2.6	3.3	9.4
2359	12/11/2005	0.5	0.4	1.4	2.1	2.8	3.2	4	10.1
559	13/11/2005	0.3	0.2	1.3	2	2.7	3.2	4	10
1159	13/11/2005	0.5	0.3	1.5	2.2	2.9	3.4	4.1	10.2
1759	13/11/2005	0.3	-0.1	1.1	1.8	2.6	3	3.8	9.9
2359	13/11/2005	0.3	0	1.2	2	2.7	3.2	4	10.1
559	14/11/2005	0.2	-0.2	0.9	1.7	2.4	2.9	3.7	9.9
1159	14/11/2005	0.2	-0.2	1	1.7	2.5	3	3.8	9.9
1759	14/11/2005	-0.4	-1.1	0.1	0.7	1.5	2	2.7	8.9
2359	14/11/2005	0	-0.4	0.7	1.4	2.1	2.7	3.5	9.7
559	15/11/2005	0	-0.4	0.8	1.5	2.2	2.7	3.5	9.8
1159	15/11/2005	-0.2	-0.2	1	1.8	2.6	3.1	3.8	10
1759	15/11/2005	-0.7	-1	0.4	1	1.8	2.3	3.1	9.4
2359	15/11/2005	-0.9	-0.8	0.6	1.3	2.1	2.6	3.4	9.7
559	16/11/2005	-0.9	-0.7	0.8	1.5	2.3	2.8	3.6	9.9
1159	16/11/2005	-0.7	-0.6	1	1.7	2.5	2.9	3.7	10
1759	16/11/2005	-0.7	-0.8	0.6	1.3	2.1	2.6	3.4	9.7
2359	16/11/2005	-0.5	-0.6	0.7	1.4	2.2	2.7	3.5	9.8
559	17/11/2005	-0.6	-0.6	0.5	1.3	2	2.5	3.3	9.7



## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	17/11/2005	-0.3	-0.3	0.9	1.6	2.3	2.8	3.6	10
1759	17/11/2005	-0.4	-0.4	0.6	1.3	2	2.6	3.4	9.8
2359	17/11/2005	-0.4	-0.6	0.3	1.1	1.8	2.3	3.1	9.5
559	18/11/2005	0	-0.2	0.7	1.4	2.1	2.5	3.4	9.8
1159	18/11/2005	-0.2	-0.5	0.3	0.9	1.6	2.1	2.9	9.4
1759	18/11/2005	-0.2	-0.7	0	0.6	1.3	1.8	2.6	9.1
2359	18/11/2005	-0.1	-0.3	0.4	1	1.6	2.2	3	9.5
559	19/11/2005	0	-0.2	0.4	1.1	1.7	2.2	3	9.5
1159	19/11/2005	0.2	-0.1	0.6	1.2	1.9	2.3	3.1	9.6
1759	19/11/2005	-0.4	-0.8	-0.2	0.4	1	1.5	2.3	8.8
2359	19/11/2005	-0.2	-0.4	0.1	0.7	1.4	1.8	2.7	9.2
559	20/11/2005	0	-0.2	0.3	0.9	1.5	1.9	2.7	9.3
1159	20/11/2005	0.2	0	0.5	1.1	1.7	2.2	2.9	9.4
1759	20/11/2005	-0.1	-0.5	0	0.5	1.1	1.5	2.3	8.9
2359	20/11/2005	0	-0.1	0.3	0.8	1.4	1.9	2.7	9.2
559	21/11/2005	0.2	0	0.6	1.1	1.6	2.1	2.8	9.4
1159	21/11/2005	0.1	0	0.4	1	1.5	2	2.7	9.3
1759	21/11/2005	0.1	0	0.5	1	1.5	1.9	2.7	9.2
2359	21/11/2005	0.2	0	0.6	1	1.6	2	2.7	9.2
559	22/11/2005	0	-0.3	0.3	0.7	1.2	1.7	2.4	8.9
1159	22/11/2005	0.3	0.2	0.7	1.2	1.7	2.1	2.8	9.3
1759	22/11/2005	0	-0.1	0.4	0.9	1.4	1.8	2.5	9
2359	22/11/2005	0.1	-0.1	0.3	0.8	1.3	1.7	2.5	9
559	23/11/2005	0.1	-0.2	0.3	0.7	1.2	1.6	2.4	8.9
1159	23/11/2005	0.1	0	0.5	1	1.5	1.8	2.6	9
1759	23/11/2005	0.1	-0.1	0.4	0.9	1.4	1.7	2.5	9
2359	23/11/2005	0.1	0	0.5	0.9	1.4	1.8	2.5	8.9
559	24/11/2005	0.2	0.1	0.6	1	1.5	1.9	2.6	9
1159	24/11/2005	0.3	0.2	0.7	1.2	1.6	2	2.7	9.1
1759	24/11/2005	0	-0.4	0.1	0.5	1	1.4	2.1	8.5
2359	24/11/2005	0	-0.2	0.3	0.7	1.2	1.6	2.3	8.8
559	25/11/2005	0.2	-0.1	0.5	0.9	1.4	1.8	2.5	8.9
1159	25/11/2005	0.2	-0.1	0.6	1	1.4	1.8	2.5	8.9
1759	25/11/2005	0	-0.4	0.2	0.7	1.1	1.5	2.2	8.6
2359	25/11/2005	0	-0.6	0.2	0.6	1.1	1.5	2.2	8.6
559	26/11/2005	-0.2	-0.8	0.3	0.7	1.2	1.6	2.3	8.6
1159	26/11/2005	-0.1	-1.3	0.2	0.7	1.2	1.6	2.2	8.5
1759	26/11/2005	-0.2	-1.5	0	0.5	1	1.4	2.1	8.4
2359	26/11/2005	-0.4	-1.8	-0.1	0.5	1	1.4	2.1	8.4
559	27/11/2005	-0.8	-2.2	0	0.6	1.1	1.5	2.2	8.5
1159	27/11/2005	-0.7	-2.3	0.4	1.1	1.6	2	2.7	8.9
1759	27/11/2005	-0.9	-2.5	-0.4	0.2	0.8	1.2	1.9	8.2
2359	27/11/2005	-1.1	-2.2	-0.2	0.4	1	1.4	2.1	8.4
559	28/11/2005	-1.3	-2.3	-0.2	0.4	1	1.4	2.1	8.4
1159	28/11/2005	-1.6	-2.5	-0.3	0.4	1	1.4	2.1	8.4
1759	28/11/2005	-1.8	-2.7	-0.5	0.3	0.9	1.3	2	8.3
2359	28/11/2005	-2.1	-2.9	-0.5	0.3	0.9	1.4	2.1	8.4
559	29/11/2005	-2.4	-3.1	-0.6	0.3	0.9	1.3	2	8.3
1159	29/11/2005	-2.5	-3.1	-0.6	0.4	1	1.4	2.1	8.4
1759	29/11/2005	-2.5	-2.9	-0.8	0.2	0.8	1.2	2	8.3
2359	29/11/2005	-2.8	-2.8	-0.8	0.2	0.8	1.2	1.9	8.3
559	30/11/2005	-2.9	-3	-1	0	0.6	1.1	1.8	8.1
1159	30/11/2005	-2.8	-2.7	-0.6	0.4	1.1	1.5	2.2	8.5
1759	30/11/2005	-2.9	-3	-1.1	0	0.6	1.1	1.8	8.1
2359	30/11/2005	-2.9	-2.9	-1.1	0	0.6	1.1	1.8	8.2
559	01/12/2005	-2.9	-2.9	-1	0.1	0.7	1.1	1.8	8.2
1159	01/12/2005	-2.8	-2.8	-1	0.1	0.7	1.2	1.9	8.2
1759	01/12/2005	-3	-2.9	-1.2	-0.1	0.6	1	1.7	8.1
2359	01/12/2005	-3	-2.8	-1.2	0	0.6	1	1.7	8.1
559	02/12/2005	-3.4	-2.8	-1.2	-0.1	0.5	0.9	1.7	8
1159	02/12/2005	-3.5	-2.6	-1	0.1	0.7	1.1	1.8	8.2
1759	02/12/2005	-3.7	-2.7	-1.2	-0.1	0.5	0.9	1.6	8
2359	02/12/2005	-3.9	-2.7	-1.2	-0.1	0.5	0.9	1.6	8
559	03/12/2005	-3.7	-2.9	-1.3	-0.1	0.4	0.8	1.5	7.9
1159	03/12/2005	-3.6	-2.7	-1.2	0	0.5	1	1.7	8.1
1759	03/12/2005	-3.4	-2.7	-1.3	-0.2	0.4	0.8	1.5	7.9
2359	03/12/2005	-3.3	-2.5	-1.2	-0.1	0.4	0.8	1.5	7.9
559	04/12/2005	-3.3	-2.5	-1.3	-0.2	0.4	0.8	1.5	7.9
1159	04/12/2005	-3.2	-2.4	-1.1	0	0.5	0.9	1.6	8
1759	04/12/2005	-3.7	-2.5	-1.3	-0.2	0.3	0.7	1.4	7.8
2359	04/12/2005	-4.7	-2.9	-1.5	-0.5	0	0.4	1.1	7.5
559	05/12/2005	-5.5	-3	-1.4	-0.3	0.3	0.7	1.4	7.8
1159	05/12/2005	-5.1	-3	-1.2	0	0.5	0.9	1.6	8

MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1759	05/12/2005	-4.9	-3.5	-1.6	-0.4	0.2	0.6	1.3	7.7
2359	05/12/2005	-5.1	-3.8	-1.8	-0.6	0	0.4	1.1	7.5
559	06/12/2005	-5.4	-3.6	-1.5	-0.1	0.5	0.9	1.6	8
1159	06/12/2005	-6	-4.1	-1.8	-0.3	0.3	0.7	1.4	7.7
1759	06/12/2005	-6	-4.3	-2	-0.5	0.1	0.5	1.2	7.6
2359	06/12/2005	-6.4	-4.4	-2.2	-0.6	0.1	0.5	1.2	7.5
559	07/12/2005	-6.7	-4.1	-1.8	-0.2	0.5	0.9	1.6	7.9
1159	07/12/2005	-6.4	-3.9	-1.6	0.1	0.8	1.1	1.8	8.1
1759	07/12/2005	-5.4	-3.9	-2	-0.4	0.3	0.7	1.4	7.7
2359	07/12/2005	-4.2	-3.4	-1.8	-0.3	0.5	0.8	1.5	7.8
559	08/12/2005	-4.1	-3.6	-2.3	-1	-0.2	0.2	0.9	7.2
1159	08/12/2005	-3.6	-2.9	-1.7	-0.5	0.3	0.7	1.3	7.7
1759	08/12/2005	-3.8	-2.6	-1.5	-0.5	0.3	0.7	1.4	7.7
2359	08/12/2005	-3.5	-2.5	-1.6	-0.6	0.2	0.6	1.3	7.6
559	09/12/2005	-2.6	-2.4	-1.5	-0.6	0.2	0.6	1.2	7.5
1159	09/12/2005	-0.9	-1.8	-1.3	-0.5	0.3	0.6	1.3	7.6
1759	09/12/2005	-0.5	-1.3	-1.1	-0.5	0.2	0.6	1.2	7.5
2359	09/12/2005	-0.6	-1.3	-1.2	-0.7	-0.1	0.3	1	7.3
559	10/12/2005	-0.3	-0.8	-0.8	-0.4	0.2	0.6	1.3	7.5
1159	10/12/2005	-0.1	-0.5	-0.5	0	0.5	0.8	1.5	7.7
1759	10/12/2005	-0.1	-0.7	-0.5	-0.2	0.2	0.6	1.2	7.5
2359	10/12/2005	-0.4	-0.9	-0.9	-0.6	-0.1	0.3	0.9	7.2
559	11/12/2005	0	-0.4	-0.4	-0.1	0.4	0.7	1.4	7.6
1159	11/12/2005	-0.3	-0.5	-0.5	-0.1	0.3	0.7	1.3	7.5
1759	11/12/2005	-0.5	-1.1	-1	-0.8	-0.4	0	0.7	6.9
2359	11/12/2005	-0.9	-1	-0.6	-0.4	0	0.4	1	7.2
559	12/12/2005	-1.2	-0.9	-0.3	0	0.4	0.7	1.3	7.5
1159	12/12/2005	-2.1	-1.3	-0.7	-0.3	0.1	0.4	1.1	7.2
1759	12/12/2005	-1.8	-1.6	-0.9	-0.6	-0.2	0.1	0.8	7
2359	12/12/2005	-1.8	-1.3	-0.5	-0.1	0.2	0.5	1.2	7.3
559	13/12/2005	-1.7	-1.5	-0.9	-0.4	-0.1	0.3	0.9	7.1
1159	13/12/2005	-1.7	-1.2	-0.7	-0.2	0.1	0.4	1.1	7.2
1759	13/12/2005	-1.9	-1.5	-0.9	-0.5	-0.1	0.2	0.8	6.9
2359	13/12/2005	-2	-1.3	-0.8	-0.3	0.1	0.4	1.1	7.2
559	14/12/2005	-1.9	-1.3	-0.6	-0.2	0.2	0.6	1.2	7.2
1159	14/12/2005	-2.2	-1.5	-0.9	-0.5	0	0.3	0.9	7
1759	14/12/2005	-2.3	-1.7	-1.2	-0.7	-0.3	0.1	0.7	6.8
2359	14/12/2005	-2.3	-1.8	-1.2	-0.7	-0.2	0.1	0.7	6.8
559	15/12/2005	-2.4	-1.6	-0.8	-0.3	0.2	0.5	1.1	7.1
1159	15/12/2005	-2.5	-1.7	-0.8	-0.3	0.2	0.5	1.1	7.1
1759	15/12/2005	-2.7	-2.1	-1.2	-0.7	-0.2	0.2	0.8	6.8
2359	15/12/2005	-2.9	-2.1	-1.2	-0.5	0	0.3	0.9	6.9
559	16/12/2005	-3.2	-2.4	-1.3	-0.6	-0.1	0.2	0.8	6.8
1159	16/12/2005	-3.6	-2.4	-1.3	-0.5	0.1	0.4	1	7
1759	16/12/2005	-4.4	-2.9	-1.7	-0.8	-0.3	0.1	0.7	6.6
2359	16/12/2005	-5.2	-3	-1.6	-0.7	-0.1	0.2	0.8	6.8
559	17/12/2005	-5.8	-3.1	-1.6	-0.6	0	0.3	0.9	6.9
1159	17/12/2005	-6.4	-3.3	-1.7	-0.6	0.1	0.4	1	6.9
1759	17/12/2005	-5.7	-3.4	-1.9	-0.7	0	0.3	0.9	6.8
2359	17/12/2005	-5.4	-3.6	-2.1	-0.9	-0.1	0.2	0.8	6.8
559	18/12/2005	-5.2	-3.6	-2.1	-0.9	-0.1	0.2	0.8	6.8
1159	18/12/2005	-5	-3.4	-1.9	-0.6	0.3	0.5	1.1	7
1759	18/12/2005	-5	-3.6	-2.3	-1.1	-0.2	0.1	0.7	6.6
2359	18/12/2005	-4.8	-3.6	-2.4	-1.3	-0.3	0	0.6	6.5
559	19/12/2005	-4.7	-3.4	-2.2	-1.1	-0.2	0.2	0.8	6.7
1159	19/12/2005	-4.2	-3	-1.7	-0.6	0.3	0.6	1.2	7
1759	19/12/2005	-3.9	-2.9	-2	-1	-0.1	0.2	0.8	6.7
2359	19/12/2005	-3.7	-2.8	-2	-1.1	-0.2	0.1	0.7	6.6
559	20/12/2005	-4	-2.7	-2	-1.2	-0.2	0.1	0.7	6.6
1159	20/12/2005	-4.4	-2.8	-1.7	-0.8	0.1	0.4	1	6.8
1759	20/12/2005	-4.6	-3.2	-2.1	-1.2	-0.3	0	0.6	6.5
2359	20/12/2005	-4.4	-2.9	-1.6	-0.7	0.3	0.6	1.1	7
559	21/12/2005	-4.5	-3	-1.8	-0.8	0.1	0.4	1	6.8
1159	21/12/2005	-4.4	-3	-1.9	-0.9	0	0.3	0.9	6.7
1759	21/12/2005	-3.1	-2.8	-2.1	-1.2	-0.2	0.1	0.7	6.5
2359	21/12/2005	-2.7	-2.7	-2.1	-1.4	-0.4	-0.1	0.5	6.3
559	22/12/2005	-3	-2.5	-2	-1.3	-0.4	-0.1	0.5	6.3
1159	22/12/2005	-3.3	-2.3	-1.7	-1	-0.1	0.2	0.8	6.6
1759	22/12/2005	-3.1	-2.2	-1.6	-1	-0.1	0.2	0.8	6.6
2359	22/12/2005	-2.8	-2.3	-1.8	-1.2	-0.4	-0.1	0.5	6.3
559	23/12/2005	-2.9	-2.1	-1.7	-1.1	-0.3	0	0.6	6.4
1159	23/12/2005	-3.2	-2	-1.5	-1	-0.2	0.1	0.7	6.5
1759	23/12/2005	-3	-1.9	-1.3	-0.8	-0.1	0.2	0.8	6.6

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
2359	23/12/2005	-3.1	-1.9	-1.4	-0.9	-0.1	0.2	0.8	6.5
559	24/12/2005	-3.6	-2.3	-1.8	-1.3	-0.6	-0.2	0.3	6.1
1159	24/12/2005	-3.7	-1.9	-1.1	-0.5	0.2	0.5	1	6.7
1759	24/12/2005	-3.5	-2.4	-1.7	-1.1	-0.4	0	0.5	6.3
2359	24/12/2005	-3	-2	-1.4	-0.8	-0.1	0.3	0.8	6.5
559	25/12/2005	-2.7	-2	-1.5	-1	-0.2	0.1	0.7	6.4
1159	25/12/2005	-2.8	-2.1	-1.7	-1.2	-0.5	-0.1	0.4	6.1
1759	25/12/2005	-2.7	-2	-1.6	-1.1	-0.5	-0.1	0.5	6.1
2359	25/12/2005	-2.6	-1.5	-1.1	-0.6	0.1	0.4	0.9	6.6
559	26/12/2005	-2.6	-1.7	-1.2	-0.7	-0.1	0.2	0.8	6.5
1159	26/12/2005	-2.6	-1.6	-1.3	-0.8	-0.2	0.2	0.8	6.4
1759	26/12/2005	-2.7	-1.9	-1.6	-1.2	-0.5	-0.2	0.4	6.1
2359	26/12/2005	-3.2	-1.9	-1.4	-1	-0.4	0	0.6	6.2
559	27/12/2005	-3.2	-1.9	-1.3	-0.8	-0.2	0.1	0.7	6.3
1159	27/12/2005	-3	-1.8	-1.1	-0.6	0	0.3	0.9	6.5
1759	27/12/2005	-2.9	-1.8	-1.3	-0.8	-0.1	0.2	0.8	6.4
2359	27/12/2005	-2.7	-1.8	-1.2	-0.7	-0.1	0.2	0.8	6.4
559	28/12/2005	-2.7	-1.8	-1.3	-0.9	-0.2	0.1	0.6	6.2
1159	28/12/2005	-2.4	-1.5	-1	-0.5	0	0.4	0.9	6.5
1759	28/12/2005	-2.4	-1.7	-1.3	-0.9	-0.3	0.1	0.6	6.2
2359	28/12/2005	-2.3	-1.5	-1.2	-0.8	-0.2	0.1	0.7	6.3
559	29/12/2005	-2.4	-1.5	-1.2	-0.8	-0.3	0.1	0.6	6.2
1159	29/12/2005	-2.3	-1.4	-1	-0.6	-0.1	0.2	0.8	6.3
1759	29/12/2005	-2.3	-1.5	-1.2	-0.8	-0.3	0	0.6	6.1
2359	29/12/2005	-2.4	-1.5	-1.2	-0.8	-0.3	0	0.6	6.2
559	30/12/2005	-2.6	-1.5	-1.2	-0.8	-0.3	0	0.6	6.1
1159	30/12/2005	-2.7	-1.6	-1.2	-0.8	-0.3	0	0.5	6.1
1759	30/12/2005	-2.7	-1.5	-1.1	-0.7	-0.2	0.2	0.7	6.2
2359	30/12/2005	-2.9	-1.6	-1.2	-0.7	-0.2	0.1	0.6	6.1
559	31/12/2005	-2.9	-1.6	-1.1	-0.7	-0.2	0.1	0.7	6.2
1159	31/12/2005	-2.8	-1.6	-1	-0.6	-0.1	0.2	0.7	6.2
1759	31/12/2005	-2.6	-1.6	-1.2	-0.8	-0.2	0.1	0.6	6.1
2359	31/12/2005	-2.5	-1.6	-1.2	-0.8	-0.3	0	0.6	6
559	01/01/2006	-3.3	-1.5	-1.2	-0.8	-0.3	0	0.6	6.1
1159	01/01/2006	-2.6	-1.4	-1	-0.7	-0.2	0.2	0.7	6.1
1759	01/01/2006	-1.4	-1.4	-1.1	-0.8	-0.3	0.1	0.6	6
2359	01/01/2006	-2.1	-1.4	-1.1	-0.8	-0.3	0	0.6	6
559	02/01/2006	-1.4	-1.3	-1.1	-0.7	-0.3	0	0.6	6
1159	02/01/2006	-3.1	-1.3	-1	-0.7	-0.3	0.1	0.6	6
1759	02/01/2006	-3.4	-1.2	-1	-0.7	-0.3	0	0.6	6
2359	02/01/2006	-3.7	-1.2	-1	-0.7	-0.3	0.1	0.6	6
559	03/01/2006	-2.6	-1.2	-1	-0.7	-0.3	0	0.6	6
1159	03/01/2006	-5.4	-1.2	-1	-0.7	-0.3	0	0.6	5.9
1759	03/01/2006	-10.3	-1.5	-1.3	-1	-0.6	-0.3	0.3	5.7
2359	03/01/2006	-15.5	-1.6	-1.3	-0.9	-0.5	-0.2	0.3	5.7
559	04/01/2006	-14.1	-1.6	-1	-0.7	-0.2	0	0.6	6
1159	04/01/2006	-11.7	-2	-1.4	-1	-0.5	-0.2	0.3	5.7
1759	04/01/2006	-14	-2	-1.4	-0.9	-0.4	-0.1	0.5	5.8
2359	04/01/2006	-13	-1.9	-1.2	-0.7	-0.2	0.1	0.6	6
559	05/01/2006	-11.2	-2.1	-1.4	-0.8	-0.3	0	0.6	5.9
1159	05/01/2006	-13.7	-2.1	-1.4	-0.8	-0.2	0.1	0.6	5.9
1759	05/01/2006	-11.1	-2.1	-1.4	-0.9	-0.3	0	0.5	5.9
2359	05/01/2006	-11.2	-2	-1.4	-0.8	-0.2	0.1	0.6	5.9
559	06/01/2006	-10.2	-2.1	-1.5	-1	-0.4	-0.1	0.5	5.8
1159	06/01/2006	-11.8	-2.1	-1.6	-1.1	-0.4	-0.1	0.4	5.7
1759	06/01/2006	-13	-1.9	-1.5	-1	-0.4	-0.1	0.5	5.8
2359	06/01/2006	-14.7	-2	-1.5	-1.1	-0.5	-0.1	0.4	5.7
559	07/01/2006	-16.1	-1.9	-1.4	-0.9	-0.4	0	0.5	5.8
1159	07/01/2006	-15	-1.8	-1.3	-0.8	-0.2	0.1	0.6	5.9
1759	07/01/2006	-15	-1.9	-1.5	-1	-0.4	-0.1	0.4	5.7
2359	07/01/2006	-21.1	-2	-1.6	-1.1	-0.5	-0.2	0.3	5.6
559	08/01/2006	-22.7	-1.9	-1.4	-1	-0.4	-0.1	0.5	5.7
1159	08/01/2006	-17.1	-1.7	-1.1	-0.6	-0.1	0.3	0.8	6
1759	08/01/2006	-10.8	-2	-1.5	-1	-0.4	-0.1	0.4	5.7
2359	08/01/2006	-16.7	-2.2	-1.7	-1.2	-0.7	-0.3	0.2	5.5
559	09/01/2006	-23.3	-2.4	-1.8	-1.3	-0.7	-0.4	0.1	5.4
1159	09/01/2006	-18.1	-1.9	-1.2	-0.7	-0.1	0.2	0.7	5.9
1759	09/01/2006	-19.4	-2.6	-1.9	-1.4	-0.8	-0.4	0.1	5.3
2359	09/01/2006	-8.8	-2.1	-1.4	-0.8	-0.2	0.1	0.6	5.8
559	10/01/2006	-16.8	-2.2	-1.7	-1.1	-0.4	-0.1	0.5	5.7
1159	10/01/2006	-15.5	-2.1	-1.4	-0.9	-0.3	0.1	0.6	5.8
1759	10/01/2006	-11.4	-2.2	-1.6	-1	-0.4	-0.1	0.5	5.7
2359	10/01/2006	-9.8	-2.1	-1.5	-1	-0.4	0	0.5	5.7

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
559	11/01/2006	-11.4	-2.1	-1.6	-1	-0.4	-0.1	0.4	5.6
1159	11/01/2006	-14.3	-1.9	-1.4	-0.9	-0.3	0	0.6	5.7
1759	11/01/2006	-11.3	-2.1	-1.6	-1.1	-0.5	-0.2	0.3	5.5
2359	11/01/2006	-10.9	-2	-1.6	-1.1	-0.5	-0.1	0.4	5.5
559	12/01/2006	-17	-2	-1.6	-1.2	-0.6	-0.2	0.3	5.5
1159	12/01/2006	-21.7	-1.9	-1.5	-1.1	-0.5	-0.1	0.4	5.5
1759	12/01/2006	-22.4	-2	-1.6	-1.1	-0.6	-0.2	0.3	5.5
2359	12/01/2006	-24.1	-1.9	-1.4	-1	-0.4	-0.1	0.5	5.6
559	13/01/2006	-23.7	-1.9	-1.4	-1	-0.4	-0.1	0.5	5.6
1159	13/01/2006	-21.9	-2	-1.4	-0.9	-0.4	0	0.5	5.6
1759	13/01/2006	-20.1	-2.2	-1.6	-1.2	-0.6	-0.2	0.3	5.4
2359	13/01/2006	-21.6	-2.1	-1.6	-1.1	-0.6	-0.2	0.3	5.5
559	14/01/2006	-15.5	-1.8	-1.2	-0.7	-0.1	0.2	0.7	5.8
1159	14/01/2006	-14.7	-2	-1.5	-1	-0.5	-0.1	0.4	5.5
1759	14/01/2006	-13.8	-2.1	-1.6	-1.1	-0.6	-0.2	0.3	5.5
2359	14/01/2006	-14.6	-2	-1.6	-1.1	-0.5	-0.2	0.4	5.5
559	15/01/2006	-15.5	-1.9	-1.5	-1	-0.5	-0.1	0.4	5.5
1159	15/01/2006	-21.5	-1.9	-1.5	-1.1	-0.6	-0.2	0.3	5.4
1759	15/01/2006	-21.3	-2	-1.6	-1.1	-0.6	-0.2	0.3	5.4
2359	15/01/2006	-22	-2	-1.5	-1.1	-0.6	-0.2	0.3	5.4
559	16/01/2006	-22.8	-2.2	-1.7	-1.2	-0.7	-0.3	0.2	5.3
1159	16/01/2006	-28	-2	-1.5	-1	-0.5	-0.1	0.4	5.4
1759	16/01/2006	-27.9	-3.1	-2.4	-2	-1.4	-1.1	-0.6	4.5
2359	16/01/2006	-24.7	-2.2	-1.5	-1	-0.4	-0.1	0.4	5.5
559	17/01/2006	-22.5	-2.5	-1.8	-1.3	-0.7	-0.4	0.1	5.2
1159	17/01/2006	-20.7	-2.2	-1.5	-0.9	-0.3	0	0.5	5.6
1759	17/01/2006	-17.1	-2.3	-1.7	-1.2	-0.6	-0.2	0.3	5.3
2359	17/01/2006	-18.5	-2.3	-1.8	-1.2	-0.6	-0.3	0.2	5.3
559	18/01/2006	-21	-2.3	-1.8	-1.3	-0.7	-0.3	0.2	5.3
1159	18/01/2006	-29.3	-2.2	-1.7	-1.2	-0.7	-0.3	0.2	5.3
1759	18/01/2006	-28.3	-2.3	-1.8	-1.3	-0.7	-0.3	0.2	5.2
2359	18/01/2006	-31.1	-2.4	-1.9	-1.4	-0.8	-0.5	0	5.1
559	19/01/2006	-43	-2.5	-2	-1.5	-1	-0.6	-0.1	5
1159	19/01/2006	-41.1	-2	-1.5	-1	-0.4	0	0.5	5.5
1759	19/01/2006	-40.9	-3.1	-2.4	-1.9	-1.3	-1	-0.5	4.6
2359	19/01/2006	-48.7	-2.7	-2	-1.5	-0.9	-0.5	0	5
559	20/01/2006	-55.8	-2.6	-1.9	-1.3	-0.7	-0.3	0.2	5.2
1159	20/01/2006	-50.1	-2.5	-1.6	-1	-0.4	0	0.5	5.5
1759	20/01/2006	-44.8	-2.9	-2	-1.3	-0.7	-0.3	0.2	5.2
2359	20/01/2006	-47	-2.6	-1.8	-1.1	-0.4	-0.1	0.5	5.5
559	21/01/2006	-48.1	-3.1	-2.2	-1.5	-0.9	-0.5	0.1	5.1
1159	21/01/2006	-44	-2.3	-1.3	-0.6	0.1	0.5	1	5.9
1759	21/01/2006	-27.8	-3.3	-2.3	-1.5	-0.9	-0.5	0	5.1
2359	21/01/2006	-19.1	-2.9	-1.9	-1.2	-0.5	-0.1	0.4	5.4
559	22/01/2006	-12.4	-2.7	-1.8	-1.1	-0.4	0	0.5	5.5
1159	22/01/2006	-2.2	-2.7	-2	-1.2	-0.5	-0.1	0.5	5.5
1759	22/01/2006	1.9	-2.9	-2.3	-1.7	-1	-0.5	0	5
2359	22/01/2006	3.3	-2.3	-1.8	-1.2	-0.5	-0.1	0.4	5.4
559	23/01/2006	-1.2	-2.1	-1.7	-1.2	-0.5	-0.1	0.4	5.4
1159	23/01/2006	4.5	-2.1	-1.7	-1.2	-0.6	-0.2	0.4	5.3
1759	23/01/2006	-3.1	-2.4	-2.1	-1.7	-1.1	-0.6	-0.1	4.9
2359	23/01/2006	-26.5	-2.4	-2.2	-1.8	-1.2	-0.8	-0.2	4.8
559	24/01/2006	-35.4	-2	-1.7	-1.3	-0.7	-0.3	0.2	5.2
1159	24/01/2006	-31.2	-1.8	-1.1	-0.7	-0.2	0.1	0.7	5.6
1759	24/01/2006	-26.6	-2.5	-1.8	-1.4	-0.8	-0.5	0.1	5.1
2359	24/01/2006	-29.8	-2.6	-2	-1.5	-1	-0.6	0	5
559	25/01/2006	-30.6	-2.5	-1.9	-1.4	-0.9	-0.5	0.1	5.1
1159	25/01/2006	-21.5	-1.7	-0.9	-0.4	0.2	0.6	1.1	6
1759	25/01/2006	-12.1	-3.1	-2.4	-1.9	-1.3	-0.9	-0.3	4.6
2359	25/01/2006	-26.4	-2.9	-2.4	-1.8	-1.2	-0.8	-0.2	4.7
559	26/01/2006	-28.8	-2.5	-1.9	-1.3	-0.7	-0.3	0.3	5.2
1159	26/01/2006	-26.4	-2.7	-2.1	-1.5	-0.9	-0.5	0.1	5
1759	26/01/2006	-34.2	-3.2	-2.5	-2	-1.4	-0.9	-0.4	4.6
2359	26/01/2006	-41.6	-2.8	-2.2	-1.6	-1	-0.6	0	5
559	27/01/2006	-45.7	-2.7	-1.9	-1.3	-0.7	-0.3	0.3	5.3
1159	27/01/2006	-43.3	-2.8	-1.8	-1.2	-0.5	-0.2	0.4	5.4
1759	27/01/2006	-36.9	-3.2	-2.3	-1.6	-0.9	-0.5	0.1	5
2359	27/01/2006	-33.4	-3	-2.1	-1.4	-0.7	-0.3	0.3	5.2
559	28/01/2006	-33.1	-3.1	-2.2	-1.5	-0.8	-0.4	0.2	5.1
1159	28/01/2006	-26.4	-3	-1.9	-1.2	-0.5	-0.1	0.5	5.3
1759	28/01/2006	-20.9	-3.4	-2.6	-1.8	-1.2	-0.7	-0.1	4.8
2359	28/01/2006	-20.3	-3.2	-2.4	-1.8	-1.1	-0.6	0	4.9
559	29/01/2006	-23.4	-3.1	-2.5	-1.8	-1.1	-0.6	0	4.9

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	29/01/2006	-22.2	-2.9	-2.2	-1.5	-0.9	-0.4	0.2	5.1
1759	29/01/2006	-15.1	-3	-2.4	-1.8	-1.1	-0.7	0	4.9
2359	29/01/2006	-20	-3.1	-2.6	-2.1	-1.4	-0.9	-0.3	4.6
559	30/01/2006	-29.9	-3	-2.4	-1.9	-1.3	-0.8	-0.2	4.8
1159	30/01/2006	-25.8	-2.6	-2	-1.4	-0.8	-0.4	0.3	5.2
1759	30/01/2006	-24.4	-3.1	-2.4	-1.9	-1.3	-0.8	-0.2	4.8
2359	30/01/2006	-34.4	-3	-2.4	-1.8	-1.2	-0.7	0	4.9
559	31/01/2006	-43.5	-3.1	-2.3	-1.7	-1.1	-0.6	0.1	5
1159	31/01/2006	-38.1	-2.5	-1.5	-0.8	-0.2	0.3	0.9	5.8
1759	31/01/2006	-28.6	-3.5	-2.5	-1.8	-1.2	-0.8	-0.1	4.9
2359	31/01/2006	-21.4	-3	-2.1	-1.3	-0.7	-0.3	0.4	5.3
559	01/02/2006	-19.3	-3.4	-2.6	-1.9	-1.2	-0.8	-0.1	4.8
1159	01/02/2006	-17.8	-3.1	-2.4	-1.6	-0.9	-0.5	0.2	5.1
1759	01/02/2006	-15.5	-4.3	-3.4	-2.8	-2.1	-1.7	-1	3.9
2359	01/02/2006	-18.4	-3.1	-2.4	-1.7	-1.1	-0.6	0.1	5
559	02/02/2006	-19.1	-3.3	-2.6	-2	-1.3	-0.8	-0.1	4.8
1159	02/02/2006	-15.6	-2.9	-2.2	-1.5	-0.8	-0.4	0.3	5.2
1759	02/02/2006	-6.5	-4.2	-3.4	-2.9	-2.2	-1.8	-1.1	3.9
2359	02/02/2006	-11.2	-3.3	-2.7	-2.2	-1.5	-1	-0.3	4.6
559	03/02/2006	-21	-3.4	-2.8	-2.3	-1.6	-1.2	-0.4	4.5
1159	03/02/2006	-12.4	-2.9	-2.3	-1.6	-1	-0.5	0.2	5.1
1759	03/02/2006	-1.3	-3.4	-2.7	-2.2	-1.5	-1.1	-0.4	4.6
2359	03/02/2006	-7.5	-3.4	-2.9	-2.4	-1.8	-1.3	-0.5	4.4
559	04/02/2006	-16.2	-3.1	-2.6	-2.1	-1.5	-1	-0.2	4.7
1159	04/02/2006	-14.2	-2.8	-2.1	-1.6	-1	-0.6	0.2	5
1759	04/02/2006	-9.9	-3.2	-2.7	-2.2	-1.6	-1.2	-0.4	4.6
2359	04/02/2006	-9.4	-2.9	-2.4	-1.9	-1.4	-0.9	-0.1	4.8
559	05/02/2006	-12.3	-2.8	-2.4	-1.9	-1.3	-0.9	-0.1	4.8
1159	05/02/2006	-12.4	-2.8	-2.3	-1.9	-1.3	-0.9	-0.1	4.8
1759	05/02/2006	-14.6	-2.9	-2.4	-2	-1.5	-1.1	-0.3	4.7
2359	05/02/2006	-20.4	-2.8	-2.4	-2	-1.4	-1	-0.2	4.7
559	06/02/2006	-24.8	-3	-2.5	-2.2	-1.7	-1.3	-0.5	4.5
1159	06/02/2006	-24.9	-2.3	-1.9	-1.5	-1	-0.6	0.1	5.1
1759	06/02/2006	-18.5	-2.9	-2.5	-2.1	-1.6	-1.3	-0.5	4.5
2359	06/02/2006	-22.6	-2.5	-2	-1.7	-1.2	-0.8	0	4.9
559	07/02/2006	-21	-2.7	-2.2	-1.8	-1.4	-1	-0.2	4.7
1159	07/02/2006	-22.6	-2.6	-2.1	-1.7	-1.3	-0.9	-0.2	4.8
1759	07/02/2006	-13.7	-2.9	-2.4	-2.1	-1.6	-1.3	-0.5	4.5
2359	07/02/2006	-8.9	-2.6	-2.1	-1.7	-1.3	-0.9	-0.2	4.8
559	08/02/2006	-8.7	-2.6	-2.2	-1.8	-1.4	-1	-0.3	4.7
1159	08/02/2006	-4.1	-2.3	-1.9	-1.6	-1.1	-0.8	-0.1	4.9
1759	08/02/2006	6.3	-3	-2.7	-2.4	-1.9	-1.6	-0.9	4.1
2359	08/02/2006	0.9	-2.4	-2.3	-1.9	-1.5	-1.2	-0.4	4.6
559	09/02/2006	1.5	-2.3	-2.1	-1.8	-1.4	-1.1	-0.4	4.7
1159	09/02/2006	-1	-2	-1.8	-1.6	-1.2	-0.9	-0.1	4.9
1759	09/02/2006	-0.5	-2.6	-2.4	-2.2	-1.9	-1.5	-0.8	4.2
2359	09/02/2006	-18.6	-2.7	-2.6	-2.4	-2.1	-1.8	-1	4
559	10/02/2006	-25.9	-2.2	-2.1	-1.9	-1.6	-1.3	-0.5	4.5
1159	10/02/2006	-22.4	-2	-1.6	-1.3	-1	-0.8	0	4.9
1759	10/02/2006	-7.9	-2.5	-2	-1.7	-1.4	-1.1	-0.4	4.6
2359	10/02/2006	-12.5	-2.7	-2.3	-2	-1.7	-1.4	-0.7	4.4
559	11/02/2006	-15.9	-2.5	-2.2	-1.9	-1.5	-1.2	-0.5	4.5
1159	11/02/2006	-7.8	-2.2	-1.8	-1.4	-1	-0.7	-0.1	4.9
1759	11/02/2006	-3.3	-3.3	-2.9	-2.6	-2.2	-1.9	-1.2	3.8
2359	11/02/2006	-6	-2.7	-2.3	-2	-1.6	-1.3	-0.6	4.4
559	12/02/2006	-10.4	-2.1	-1.8	-1.4	-1	-0.7	0	5
1159	12/02/2006	4.5	-2.1	-1.8	-1.4	-1	-0.7	0	4.9
1759	12/02/2006	13.7	-3.1	-2.7	-2.4	-2.1	-1.7	-1.1	3.9
2359	12/02/2006	-8.8	-2.3	-2.2	-1.9	-1.5	-1.2	-0.5	4.5
559	13/02/2006	4.2	-1.7	-1.3	-1	-0.7	-0.5	0.2	5.1
1159	13/02/2006	7.8	-2.1	-1.9	-1.6	-1.3	-1	-0.3	4.6
1759	13/02/2006	5.7	-2	-2	-1.9	-1.6	-1.3	-0.6	4.4
2359	13/02/2006	-22.2	-2	-2	-1.9	-1.7	-1.4	-0.7	4.3
559	14/02/2006	-38.5	-2.3	-2.2	-2.1	-1.9	-1.6	-0.9	4.1
1159	14/02/2006	-32.6	-2.5	-2	-1.8	-1.5	-1.3	-0.7	4.3
1759	14/02/2006	-30.5	-3.2	-2.6	-2.3	-2	-1.8	-1.1	3.9
2359	14/02/2006	-37.7	-3	-2.4	-2	-1.7	-1.4	-0.7	4.3
559	15/02/2006	-40.9	-3.2	-2.4	-1.9	-1.5	-1.2	-0.6	4.4
1159	15/02/2006	-38	-3.5	-2.6	-2	-1.5	-1.2	-0.6	4.4
1759	15/02/2006	-40.4	-4.3	-3.1	-2.4	-1.9	-1.6	-1	4
2359	15/02/2006	-51.3	-4.3	-2.9	-2.1	-1.6	-1.3	-0.6	4.4
559	16/02/2006	-61.2	-4.4	-2.9	-2.1	-1.5	-1.1	-0.5	4.5
1159	16/02/2006	-50.6	-3.7	-2.1	-1	-0.4	-0.1	0.5	5.4

MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1759	16/02/2006	-35.2	-5.4	-3.8	-2.7	-2	-1.7	-1.1	3.9
2359	16/02/2006	-39	-4.5	-3	-1.9	-1.2	-0.8	-0.1	4.8
559	17/02/2006	-34	-5	-3.5	-2.4	-1.6	-1.2	-0.6	4.4
1159	17/02/2006	-24.3	-4.4	-2.9	-1.7	-1	-0.6	0.1	5
1759	17/02/2006	-16	-5.5	-4.2	-3.2	-2.3	-1.9	-1.3	3.7
2359	17/02/2006	-23.6	-4.6	-3.6	-2.6	-1.7	-1.3	-0.6	4.4
559	18/02/2006	-19.3	-4.5	-3.5	-2.5	-1.7	-1.3	-0.6	4.4
1159	18/02/2006	-13.6	-3.9	-2.9	-2	-1.2	-0.7	0	4.9
1759	18/02/2006	-3.3	-4.8	-4	-3.1	-2.3	-1.8	-1.1	3.9
2359	18/02/2006	-8.6	-4	-3.4	-2.6	-1.8	-1.3	-0.6	4.4
559	19/02/2006	-5.9	-3.8	-3.2	-2.6	-1.8	-1.3	-0.6	4.5
1159	19/02/2006	-3.9	-3.7	-3.1	-2.5	-1.8	-1.3	-0.5	4.5
1759	19/02/2006	-6	-3.7	-3.3	-2.7	-2.1	-1.6	-0.8	4.3
2359	19/02/2006	-27.4	-3.5	-3.2	-2.7	-2.1	-1.6	-0.8	4.3
559	20/02/2006	-21.7	-3.6	-3.1	-2.6	-2	-1.6	-0.8	4.3
1159	20/02/2006	-19.5	-3.2	-2.5	-2	-1.5	-1	-0.3	4.8
1759	20/02/2006	-10.7	-3.9	-3.3	-2.7	-2.2	-1.7	-1	4.1
2359	20/02/2006	-11.9	-3.5	-3.1	-2.5	-2	-1.5	-0.8	4.3
559	21/02/2006	-13.6	-3.5	-3.1	-2.6	-2.1	-1.6	-0.9	4.3
1159	21/02/2006	-10.6	-2.9	-2.5	-2	-1.5	-1	-0.3	4.8
1759	21/02/2006	-8.9	-4.1	-3.6	-3.2	-2.7	-2.3	-1.6	3.6
2359	21/02/2006	-26.3	-3.6	-3.3	-2.9	-2.4	-1.9	-1.2	4
559	22/02/2006	-30.8	-3.4	-3	-2.6	-2.1	-1.7	-0.9	4.2
1159	22/02/2006	-18.9	-2.7	-2.1	-1.6	-1.2	-0.8	0	5
1759	22/02/2006	-13.1	-4.4	-3.7	-3.3	-2.9	-2.5	-1.7	3.4
2359	22/02/2006	-24.2	-3.8	-3.4	-2.9	-2.5	-2	-1.2	3.9
559	23/02/2006	-25.8	-3.9	-3.3	-2.9	-2.4	-2	-1.2	4
1159	23/02/2006	-22.6	-3.7	-3.1	-2.6	-2.1	-1.7	-0.9	4.3
1759	23/02/2006	-22.9	-4.4	-3.7	-3.2	-2.8	-2.4	-1.6	3.6
2359	23/02/2006	-31.6	-3.7	-3.2	-2.7	-2.2	-1.8	-1	4.2
559	24/02/2006	-31.9	-3.8	-3.2	-2.7	-2.2	-1.8	-1	4.3
1159	24/02/2006	-25.1	-3.3	-2.6	-2	-1.5	-1.1	-0.4	4.8
1759	24/02/2006	-23.4	-4.1	-3.4	-2.9	-2.4	-2	-1.2	4
2359	24/02/2006	-32.7	-4.3	-3.6	-3.1	-2.6	-2.2	-1.4	3.9
559	25/02/2006	-40.4	-3.4	-2.7	-2.2	-1.6	-1.2	-0.5	4.7
1159	25/02/2006	-33.9	-3.8	-3.2	-2.5	-2	-1.6	-0.8	4.4
1759	25/02/2006	-26.3	-4.8	-4	-3.4	-2.9	-2.5	-1.7	3.5
2359	25/02/2006	-40.1	-4.5	-3.7	-3.2	-2.6	-2.2	-1.4	3.8
559	26/02/2006	-50.2	-4.3	-3.6	-3	-2.4	-2	-1.2	4.1
1159	26/02/2006	-40.2	-3.6	-2.7	-2	-1.4	-1	-0.3	4.9
1759	26/02/2006	-20.4	-4.7	-3.7	-3	-2.4	-2	-1.2	4
2359	26/02/2006	-34.4	-4.8	-3.9	-3.2	-2.6	-2.2	-1.4	3.9
559	27/02/2006	-34.9	-4.5	-3.7	-3	-2.4	-1.9	-1.1	4.2
1159	27/02/2006	-25.8	-4.2	-3.3	-2.5	-1.9	-1.5	-0.7	4.6
1759	27/02/2006	-17.8	-4.7	-3.8	-3.1	-2.5	-2	-1.2	4.1
2359	27/02/2006	-19.1	-4.7	-3.9	-3.1	-2.5	-2	-1.2	4.1
559	28/02/2006	-25.9	-5	-4.2	-3.5	-2.9	-2.4	-1.6	3.7
1159	28/02/2006	-18.5	-4.4	-3.7	-3	-2.3	-1.9	-1.1	4.3
1759	28/02/2006	-11.3	-5.6	-4.8	-4.2	-3.6	-3.1	-2.3	3
2359	28/02/2006	-27.2	-4.7	-4.1	-3.5	-2.9	-2.4	-1.6	3.8
559	01/03/2006	-29.7	-4.6	-4	-3.4	-2.8	-2.3	-1.5	3.9
1159	01/03/2006	-23.3	-4.2	-3.5	-2.9	-2.3	-1.9	-1	4.3
1759	01/03/2006	-16.1	-4.5	-3.9	-3.3	-2.7	-2.2	-1.4	4
2359	01/03/2006	-27.5	-4.7	-4.2	-3.6	-3.1	-2.6	-1.7	3.7
559	02/03/2006	-36.7	-4.5	-4	-3.4	-2.9	-2.4	-1.6	3.9
1159	02/03/2006	-31	-4	-3.5	-2.9	-2.3	-1.9	-1	4.4
1759	02/03/2006	-9.8	-5.4	-4.6	-4	-3.5	-3.1	-2.3	3.1
2359	02/03/2006	-24.2	-4.6	-4	-3.4	-2.9	-2.4	-1.6	3.9
559	03/03/2006	-29.4	-4.6	-4	-3.5	-2.9	-2.5	-1.6	3.9
1159	03/03/2006	-17.9	-4	-3.4	-2.7	-2.2	-1.7	-0.9	4.5
1759	03/03/2006	-4.6	-4.9	-4.3	-3.7	-3.1	-2.7	-1.9	3.7
2359	03/03/2006	-14.3	-4.5	-4	-3.4	-2.9	-2.4	-1.5	4
559	04/03/2006	-14.7	-4.3	-3.8	-3.2	-2.7	-2.3	-1.4	4.1
1159	04/03/2006	-11.9	-4	-3.4	-2.9	-2.4	-2	-1.1	4.4
1759	04/03/2006	-6.2	-4.4	-4	-3.5	-3.1	-2.6	-1.8	3.8
2359	04/03/2006	-17.6	-4.4	-4.1	-3.6	-3.2	-2.7	-1.9	3.7
559	05/03/2006	-24.5	-4.3	-4	-3.6	-3.2	-2.7	-1.8	3.7
1159	05/03/2006	-14.6	-3.7	-3.2	-2.8	-2.4	-2	-1.1	4.4
1759	05/03/2006	-2.2	-4.7	-4.3	-3.9	-3.4	-3	-2.2	3.4
2359	05/03/2006	-11.9	-4.2	-3.8	-3.4	-3	-2.6	-1.7	3.9
559	06/03/2006	-13.1	-4.1	-3.7	-3.3	-2.9	-2.5	-1.6	4
1159	06/03/2006	-5.9	-3.6	-3.1	-2.8	-2.4	-2	-1.2	4.4
1759	06/03/2006	4	-4.5	-4.1	-3.8	-3.4	-3	-2.2	3.4

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
2359	06/03/2006	-10.1	-4.3	-4	-3.7	-3.3	-2.9	-2.1	3.6
559	07/03/2006	-18	-4.2	-3.9	-3.6	-3.2	-2.8	-2	3.7
1159	07/03/2006	-1.1	-3.6	-3.3	-2.8	-2.5	-2.1	-1.3	4.2
1759	07/03/2006	9.8	-4.5	-4.1	-3.8	-3.5	-3.1	-2.3	3.4
2359	07/03/2006	1.3	-3.8	-3.6	-3.3	-2.9	-2.5	-1.7	3.9
559	08/03/2006	-9.1	-3.8	-3.7	-3.3	-3	-2.6	-1.8	3.8
1159	08/03/2006	3.9	-3.6	-3.3	-3	-2.7	-2.4	-1.6	4
1759	08/03/2006	12.4	-4	-3.7	-3.5	-3.2	-2.8	-2	3.6
2359	08/03/2006	8.3	-3.7	-3.6	-3.3	-3	-2.7	-1.9	3.7
559	09/03/2006	0.1	-3.5	-3.5	-3.3	-3.1	-2.7	-1.9	3.7
1159	09/03/2006	2.2	-3.1	-3	-2.9	-2.7	-2.4	-1.6	4
1759	09/03/2006	2.5	-3.2	-3.2	-3	-2.9	-2.5	-1.8	3.8
2359	09/03/2006	0.5	-3	-3.1	-3	-2.8	-2.5	-1.7	3.9
559	10/03/2006	-2	-3.1	-3.1	-3	-2.8	-2.5	-1.8	3.8
1159	10/03/2006	-2	-2.8	-2.7	-2.6	-2.5	-2.2	-1.5	4
1759	10/03/2006	0.8	-3.2	-3.2	-3.1	-2.9	-2.6	-1.9	3.6
2359	10/03/2006	-8.7	-2.9	-2.9	-2.8	-2.7	-2.4	-1.7	3.9
559	11/03/2006	-10.6	-3.1	-3	-2.9	-2.7	-2.5	-1.7	3.8
1159	11/03/2006	-10.1	-3	-2.7	-2.6	-2.4	-2.2	-1.5	4
1759	11/03/2006	-8.2	-3.6	-3.3	-3.1	-3	-2.7	-2.1	3.4
2359	11/03/2006	-24.5	-3.5	-3.3	-3.1	-2.9	-2.6	-1.9	3.5
559	12/03/2006	-31.8	-3.5	-3.2	-3	-2.8	-2.5	-1.8	3.7
1159	12/03/2006	-15.1	-3.4	-2.9	-2.5	-2.3	-2	-1.4	4
1759	12/03/2006	-1.7	-4.6	-3.9	-3.6	-3.3	-3.1	-2.5	2.9
2359	12/03/2006	-20	-4.1	-3.7	-3.3	-3	-2.7	-2	3.4
559	13/03/2006	-27.5	-4	-3.5	-3.2	-2.8	-2.5	-1.9	3.6
1159	13/03/2006	-13.3	-3.4	-2.8	-2.3	-2	-1.7	-1	4.3
1759	13/03/2006	-4.5	-4.4	-3.8	-3.3	-3	-2.7	-2	3.4
2359	13/03/2006	-16.6	-4.2	-3.8	-3.4	-3	-2.7	-2	3.4
559	14/03/2006	-24.6	-4.1	-3.7	-3.2	-2.9	-2.5	-1.8	3.6
1159	14/03/2006	-26.2	-4.1	-3.5	-3	-2.6	-2.3	-1.6	3.8
1759	14/03/2006	-10.7	-4.3	-3.6	-3.1	-2.7	-2.4	-1.7	3.7
2359	14/03/2006	-12.4	-4.2	-3.7	-3.2	-2.8	-2.4	-1.7	3.7
559	15/03/2006	-15.3	-4.3	-3.8	-3.3	-2.9	-2.6	-1.8	3.6
1159	15/03/2006	-5.3	-3.9	-3.3	-2.8	-2.4	-2	-1.3	4.1
1759	15/03/2006	4.9	-4.3	-3.8	-3.3	-2.9	-2.6	-1.8	3.6
2359	15/03/2006	-8	-4.2	-3.9	-3.5	-3.1	-2.7	-2	3.5
559	16/03/2006	-18.6	-4.3	-4	-3.7	-3.3	-2.9	-2.2	3.3
1159	16/03/2006	-5.3	-3.8	-3.3	-2.9	-2.5	-2.2	-1.5	4
1759	16/03/2006	1.8	-4.3	-3.9	-3.5	-3.2	-2.8	-2.1	3.4
2359	16/03/2006	-10.1	-4	-3.8	-3.4	-3.1	-2.7	-2	3.5
559	17/03/2006	-14.5	-3.8	-3.5	-3.2	-2.8	-2.5	-1.8	3.8
1159	17/03/2006	-12.6	-3.7	-3.2	-2.9	-2.6	-2.3	-1.5	3.9
1759	17/03/2006	-2	-4.1	-3.7	-3.4	-3.1	-2.8	-2	3.5
2359	17/03/2006	-4.9	-3.9	-3.6	-3.3	-2.9	-2.6	-1.9	3.6
559	18/03/2006	-9.1	-3.9	-3.7	-3.4	-3	-2.7	-2	3.5
1159	18/03/2006	-8.7	-3.6	-3.3	-3	-2.7	-2.4	-1.6	3.9
1759	18/03/2006	-1.6	-3.9	-3.6	-3.3	-3	-2.7	-2	3.5
2359	18/03/2006	-6.3	-3.7	-3.5	-3.2	-3	-2.6	-1.9	3.6
559	19/03/2006	-6.6	-3.6	-3.5	-3.2	-3	-2.7	-1.9	3.6
1159	19/03/2006	0.3	-3.2	-3	-2.7	-2.5	-2.2	-1.5	4
1759	19/03/2006	1.4	-3.6	-3.5	-3.2	-3	-2.7	-2	3.5
2359	19/03/2006	-1.9	-3.4	-3.4	-3.2	-2.9	-2.7	-1.9	3.6
559	20/03/2006	-4.7	-3.3	-3.3	-3.2	-2.9	-2.7	-2	3.6
1159	20/03/2006	1.4	-2.8	-2.7	-2.6	-2.4	-2.2	-1.5	3.9
1759	20/03/2006	5.3	-3.2	-3.2	-3.1	-2.9	-2.6	-1.9	3.5
2359	20/03/2006	1	-3.1	-3.1	-3	-2.9	-2.6	-1.9	3.5
559	21/03/2006	-4	-2.9	-3	-2.9	-2.8	-2.6	-1.9	3.6
1159	21/03/2006	3.4	-2.7	-2.7	-2.6	-2.5	-2.3	-1.6	3.8
1759	21/03/2006	8.8	-3	-3	-2.9	-2.8	-2.5	-1.9	3.5
2359	21/03/2006	0.9	-3.1	-3.2	-3.1	-3	-2.8	-2.2	3.2
559	22/03/2006	-3.6	-2.8	-2.9	-2.8	-2.7	-2.5	-1.9	3.5
1159	22/03/2006	1.7	-2.4	-2.4	-2.3	-2.3	-2.1	-1.5	3.8
1759	22/03/2006	8	-2.7	-2.8	-2.8	-2.7	-2.5	-1.9	3.5
2359	22/03/2006	0.8	-2.7	-3	-3	-2.9	-2.7	-2.1	3.2
559	23/03/2006	-8.2	-2.6	-2.9	-3	-2.9	-2.7	-2.1	3.2
1159	23/03/2006	3.3	-2.1	-2.3	-2.3	-2.3	-2.2	-1.6	3.6
1759	23/03/2006	11.7	-2.4	-2.6	-2.7	-2.7	-2.5	-2	3.2
2359	23/03/2006	0.8	-2	-2.6	-2.7	-2.7	-2.6	-2	3.2
559	24/03/2006	-6.8	-1.8	-2.3	-2.5	-2.6	-2.4	-1.9	3.3
1159	24/03/2006	4.5	-1.3	-1.8	-2	-2.1	-2	-1.4	3.7
1759	24/03/2006	12.7	-1.7	-2.1	-2.4	-2.5	-2.4	-2	3.2
2359	24/03/2006	3.1	-1.4	-2	-2.2	-2.4	-2.3	-1.8	3.3

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
559	25/03/2006	-3.2	-1.2	-1.8	-2	-2.2	-2.1	-1.6	3.5
1159	25/03/2006	2.6	-1.1	-1.5	-1.7	-1.9	-1.9	-1.4	3.5
1759	25/03/2006	7.6	-1.2	-1.7	-1.9	-2.1	-2	-1.6	3.4
2359	25/03/2006	4.1	-1.1	-1.6	-1.8	-2	-1.9	-1.5	3.4
559	26/03/2006	0.5	-1	-1.5	-1.7	-1.9	-1.8	-1.4	3.4
1159	26/03/2006	2.9	-0.9	-1.4	-1.6	-1.8	-1.7	-1.3	3.5
1759	26/03/2006	4.4	-1	-1.4	-1.7	-1.9	-1.9	-1.4	3.3
2359	26/03/2006	1	-0.9	-1.4	-1.7	-1.8	-1.8	-1.4	3.4
559	27/03/2006	1	-0.9	-1.3	-1.6	-1.7	-1.7	-1.3	3.4
1159	27/03/2006	3.7	-0.3	-0.7	-0.9	-1.1	-1	-0.7	4
1759	27/03/2006	6.8	-1	-1.4	-1.7	-1.9	-1.8	-1.5	3.2
2359	27/03/2006	-6.3	-0.9	-1.4	-1.6	-1.8	-1.7	-1.3	3.3
559	28/03/2006	-7.9	-0.8	-1.2	-1.4	-1.6	-1.6	-1.2	3.4
1159	28/03/2006	-3.3	-0.6	-1	-1.2	-1.3	-1.3	-1	3.6
1759	28/03/2006	5.1	-1.2	-1.5	-1.8	-2	-2	-1.6	2.8
2359	28/03/2006	-13.4	-0.9	-1.4	-1.6	-1.8	-1.7	-1.3	3.2
559	29/03/2006	-19.6	-1	-1.5	-1.7	-1.9	-1.8	-1.5	3
1159	29/03/2006	2	-0.5	-0.8	-1	-1.1	-1.1	-0.8	3.5
1759	29/03/2006	10.5	-1	-1.2	-1.5	-1.6	-1.6	-1.4	3
2359	29/03/2006	-0.5	-0.8	-1.2	-1.4	-1.5	-1.5	-1.1	3.2
559	30/03/2006	-3.1	-0.5	-0.9	-1.1	-1.2	-1.2	-0.8	3.5
1159	30/03/2006	9.8	-0.7	-1	-1.1	-1.3	-1.2	-1	3.4
1759	30/03/2006	16.8	-1.1	-1.3	-1.6	-1.7	-1.7	-1.4	2.9
2359	30/03/2006	4.6	-0.9	-1.3	-1.6	-1.6	-1.6	-1.3	3
559	31/03/2006	-4.7	-0.9	-1.4	-1.6	-1.7	-1.6	-1.3	3
1159	31/03/2006	11.3	-0.3	-0.4	-0.7	-0.8	-0.8	-0.5	3.7
1759	31/03/2006	17.2	-1.1	-1.4	-1.7	-1.8	-1.8	-1.5	2.7
2359	31/03/2006	-0.3	-0.6	-1.1	-1.3	-1.4	-1.4	-1.1	3.1
559	01/04/2006	-9.9	-0.7	-1.1	-1.3	-1.4	-1.4	-1.1	3.1
1159	01/04/2006	-4.7	-0.5	-0.9	-1.1	-1.2	-1.2	-0.9	3.3
1759	01/04/2006	3.5	-0.6	-0.9	-1.1	-1.3	-1.3	-1	3.1
2359	01/04/2006	-6.7	-0.5	-1	-1.2	-1.3	-1.3	-1	3.2
559	02/04/2006	-16.3	-0.7	-1.2	-1.4	-1.5	-1.5	-1.2	3
1159	02/04/2006	4	-0.2	-0.5	-0.7	-0.8	-0.8	-0.5	3.5
1759	02/04/2006	13.2	-0.7	-1	-1.3	-1.4	-1.4	-1.2	2.9
2359	02/04/2006	3.3	-0.7	-1.1	-1.3	-1.4	-1.4	-1.1	3
559	03/04/2006	-1.5	-0.4	-0.9	-1.1	-1.2	-1.1	-0.9	3.2
1159	03/04/2006	14.2	-0.1	-0.4	-0.6	-0.7	-0.7	-0.5	3.6
1759	03/04/2006	22.4	-0.9	-1.2	-1.4	-1.5	-1.5	-1.3	2.7
2359	03/04/2006	9.1	-0.4	-0.9	-1.1	-1.2	-1.2	-0.9	3.2
559	04/04/2006	-0.5	-0.4	-0.9	-1.1	-1.2	-1.2	-0.9	3.1
1159	04/04/2006	12	-0.2	-0.5	-0.7	-0.8	-0.8	-0.6	3.4
1759	04/04/2006	15.3	-0.8	-1.2	-1.4	-1.6	-1.6	-1.4	2.6
2359	04/04/2006	3.7	-0.3	-0.9	-1.1	-1.3	-1.2	-1	3
559	05/04/2006	0.2	-0.2	-0.8	-1	-1.2	-1.1	-0.8	3.1
1159	05/04/2006	9.9	0	-0.5	-0.7	-0.8	-0.8	-0.6	3.4
1759	05/04/2006	16.4	-0.7	-1.1	-1.4	-1.5	-1.6	-1.4	2.6
2359	05/04/2006	5.2	0.1	-0.8	-1	-1.2	-1.1	-0.9	3.1
559	06/04/2006	0.8	0	-0.6	-0.8	-1	-0.9	-0.7	3.2
1159	06/04/2006	8.2	0.3	-0.1	-0.4	-0.5	-0.5	-0.3	3.6
1759	06/04/2006	12.6	0.5	-0.9	-1.1	-1.3	-1.3	-1	2.9
2359	06/04/2006	6.6	0.4	-0.7	-1	-1.2	-1.2	-0.9	3
559	07/04/2006	6.5	0.4	-0.5	-0.8	-1	-1	-0.7	3.1
1159	07/04/2006	9	0.7	-0.3	-0.6	-0.7	-0.8	-0.5	3.3
1759	07/04/2006	13.8	2	-0.3	-0.6	-0.8	-0.8	-0.6	3.3
2359	07/04/2006	3.2	1.5	-0.6	-0.9	-1	-1	-0.8	3.1
559	08/04/2006	-0.6	0.5	-0.5	-0.8	-1	-1	-0.7	3.1
1159	08/04/2006	2.1	0.7	0	-0.3	-0.5	-0.5	-0.3	3.5
1759	08/04/2006	10.7	2.1	-0.6	-0.9	-1.1	-1.1	-0.9	2.9
2359	08/04/2006	3.5	2.2	-0.5	-0.9	-1	-1	-0.8	3
559	09/04/2006	2.1	1.2	-0.3	-0.6	-0.8	-0.8	-0.6	3.2
1159	09/04/2006	8.6	1.5	0.4	0.1	-0.1	-0.1	0.1	3.8
1759	09/04/2006	13	3.5	-0.3	-0.7	-0.9	-0.9	-0.7	3.1
2359	09/04/2006	9	3	-0.5	-0.9	-1.1	-1.1	-0.9	2.9
559	10/04/2006	3.5	1.6	-0.3	-0.7	-0.9	-0.9	-0.7	3.1
1159	10/04/2006	9.6	0.9	-0.2	-0.6	-0.8	-0.8	-0.6	3.1
1759	10/04/2006	14.1	4.2	-0.2	-0.6	-0.8	-0.8	-0.6	3.1
2359	10/04/2006	2.2	3.6	-0.3	-0.8	-1	-1	-0.8	2.9
559	11/04/2006	-3.5	1.2	-0.3	-0.9	-1.1	-1.1	-0.9	2.9
1159	11/04/2006	4	0.8	0	-0.4	-0.6	-0.6	-0.4	3.3
1759	11/04/2006	8.2	3.7	-0.5	-1.2	-1.4	-1.4	-1.3	2.4
2359	11/04/2006	1.5	4.1	0.3	-0.6	-0.9	-0.9	-0.7	3
559	12/04/2006	-4.1	2	0.2	-0.6	-0.8	-0.8	-0.6	3.1



## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	12/04/2006	9.6	1.2	0.5	0	-0.2	-0.3	-0.1	3.5
1759	12/04/2006	18.5	4.3	0.2	-0.7	-0.9	-0.9	-0.7	2.9
2359	12/04/2006	8.7	4.5	0.4	-0.9	-1.1	-1.1	-0.9	2.8
559	13/04/2006	2.5	3.3	0.6	-0.6	-0.9	-0.9	-0.7	3
1159	13/04/2006	9.6	2.5	0.8	-0.1	-0.4	-0.4	-0.3	3.3
1759	13/04/2006	12.4	4.7	0.9	-0.3	-0.5	-0.6	-0.4	3.2
2359	13/04/2006	3.5	4.6	1.1	-0.5	-0.8	-0.8	-0.6	3
559	14/04/2006	4.7	2.9	1.3	-0.1	-0.4	-0.4	-0.2	3.4
1159	14/04/2006	10.8	2.3	0.9	0	-0.3	-0.4	-0.2	3.4
1759	14/04/2006	16.9	4.3	0.5	-0.8	-1.1	-1.1	-0.9	2.7
2359	14/04/2006	9.2	5.1	1.5	-0.4	-0.7	-0.7	-0.6	3.1
559	15/04/2006	7.9	3.7	1.4	-0.4	-0.7	-0.7	-0.6	3
1159	15/04/2006	7.2	3.4	1.8	0.3	0	-0.1	0.1	3.6
1759	15/04/2006	11.4	5.2	1.3	-0.3	-0.7	-0.7	-0.5	3
2359	15/04/2006	1.3	4.9	1.7	-0.5	-0.8	-0.9	-0.7	2.9
559	16/04/2006	-7.4	2.5	1.3	-0.4	-0.8	-0.9	-0.7	2.9
1159	16/04/2006	6.7	1.6	1.4	0.4	-0.1	-0.2	0	3.5
1759	16/04/2006	9.4	1.6	0.2	-0.7	-1.1	-1.2	-1.1	2.5
2359	16/04/2006	-1.3	2.2	0.7	-0.4	-0.8	-0.8	-0.7	2.9
559	17/04/2006	-3.2	1.5	0.8	-0.1	-0.6	-0.6	-0.5	3.1
1159	17/04/2006	8.5	1.8	1.2	0.6	0.2	0.1	0.3	3.8
1759	17/04/2006	12.9	5	0.9	-0.3	-0.7	-0.7	-0.6	2.9
2359	17/04/2006	1.7	5.4	1.8	-0.4	-0.8	-0.8	-0.7	2.9
559	18/04/2006	-0.8	3.2	1.8	-0.2	-0.6	-0.6	-0.5	3
1159	18/04/2006	14.7	2.5	1.5	0.2	-0.2	-0.3	-0.2	3.3
1759	18/04/2006	18.1	6	1.3	-0.4	-0.9	-1	-0.8	2.7
2359	18/04/2006	5.8	6.6	2.5	-0.1	-0.8	-0.8	-0.7	2.8
559	19/04/2006	1.4	4.4	2.4	0.2	-0.6	-0.7	-0.5	3
1159	19/04/2006	21	3.6	2.2	0.6	-0.2	-0.3	-0.2	3.3
1759	19/04/2006	22.4	6.6	1.8	-0.1	-0.9	-1	-0.9	2.6
2359	19/04/2006	10.1	7.2	2.9	0.3	-0.7	-0.8	-0.6	2.9
559	20/04/2006	6.8	5.3	2.9	0.6	-0.6	-0.7	-0.5	3
1159	20/04/2006	19	4.9	2.9	1.1	0	-0.2	-0.1	3.4
1759	20/04/2006	22.9	8.4	2.8	0.4	-0.7	-0.8	-0.7	2.8
2359	20/04/2006	10.6	8.6	3.8	0.7	-0.8	-0.9	-0.7	2.7
559	21/04/2006	5.1	6.8	4	1.3	-0.4	-0.5	-0.4	3.1
1159	21/04/2006	16.7	6	4	1.8	0.1	0	0.1	3.4
1759	21/04/2006	17.2	7.5	3.2	0.8	-0.9	-1	-0.9	2.6
2359	21/04/2006	4.9	7.4	3.8	1.2	-0.6	-0.7	-0.6	2.8
559	22/04/2006	-2.8	5.7	3.8	1.6	-0.3	-0.4	-0.3	3.2
1159	22/04/2006	-3	4	3.4	1.8	0	-0.1	0	3.4
1759	22/04/2006	7.9	3.7	2.6	1.3	-0.2	-0.4	-0.3	3.1
2359	22/04/2006	-1	3.7	2.3	1	-0.4	-0.5	-0.4	3
559	23/04/2006	-8	2.1	1.9	0.9	-0.3	-0.5	-0.4	3.1
1159	23/04/2006	12.5	1.7	1.9	1.4	0.3	0.1	0.2	3.5
1759	23/04/2006	16.7	5.6	1.4	0.3	-0.7	-0.8	-0.8	2.6
2359	23/04/2006	6.6	6.9	2.9	0.8	-0.5	-0.6	-0.5	2.9
559	24/04/2006	0.6	4.7	2.9	1.1	-0.4	-0.6	-0.5	2.9
1159	24/04/2006	18.9	4.2	3	1.7	0.1	-0.1	0	3.3
1759	24/04/2006	25.4	8.2	2.8	0.9	-0.7	-0.8	-0.8	2.6
2359	24/04/2006	14.8	8.8	3.9	1.1	-0.8	-1	-1	2.5
559	25/04/2006	4.3	6.6	4.2	1.8	-0.5	-0.7	-0.6	2.8
1159	25/04/2006	21.7	6.1	4.3	2.6	0.3	0	0.1	3.4
1759	25/04/2006	28.4	10	4.1	1.7	-0.6	-0.8	-0.7	2.6
2359	25/04/2006	14.8	10.3	5.1	1.9	-0.7	-0.9	-0.9	2.5
559	26/04/2006	7.5	7.9	5.3	2.5	-0.5	-0.7	-0.6	2.8
1159	26/04/2006	20.5	7.2	5.2	3.1	0.2	-0.1	0	3.2
1759	26/04/2006	22.6	10.6	4.7	2.1	-0.7	-1.1	-1	2.3
2359	26/04/2006	9.1	10.9	6	2.8	-0.2	-0.7	-0.6	2.8
559	27/04/2006	4.5	8.8	6.2	3.6	0.4	-0.2	-0.1	3.2
1159	27/04/2006	13.2	7.7	5.6	3.6	0.6	-0.1	-0.1	3.2
1759	27/04/2006	18.1	10.8	5.9	3.6	0.7	-0.1	-0.1	3.2
2359	27/04/2006	4.9	9.8	5.9	3.1	0.1	-0.8	-0.8	2.6
559	28/04/2006	-1.6	7.6	5.9	3.6	0.7	-0.3	-0.3	3
1159	28/04/2006	22.8	6.6	5.4	3.8	1	-0.2	-0.2	3.1
1759	28/04/2006	26.6	10.2	5.2	3.1	0.6	-0.6	-0.6	2.7
2359	28/04/2006	16.8	10.4	5.9	3	0.4	-0.9	-0.9	2.4
559	29/04/2006	13.9	9.4	6.5	4	1.3	-0.2	-0.2	3.1
1159	29/04/2006	21.1	8.5	6.2	4.2	1.5	-0.1	-0.2	3.1
1759	29/04/2006	16.9	9.8	6	3.8	1.3	-0.1	-0.4	2.8
2359	29/04/2006	11.1	9.6	6.4	4.1	1.6	0.3	-0.4	2.9
559	30/04/2006	4.1	8.2	6.3	4.4	2	0.7	-0.2	3.1
1159	30/04/2006	8.9	7.6	6.5	5	2.8	1.5	0.4	3.6

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1759	30/04/2006	13.2	9.5	5.7	4	2.1	1	-0.5	2.8
2359	30/04/2006	5.9	9.5	6.4	4.3	2.3	1.3	-0.4	2.9
559	01/05/2006	0.7	7.7	6.4	4.7	2.8	1.7	0	3.1
1159	01/05/2006	4.7	7	6.5	5.4	3.7	2.6	0.9	3.7
1759	01/05/2006	2.5	7.2	5.5	4.4	3	2	0.4	3
2359	01/05/2006	-1.6	6.3	5.6	4.6	3.3	2.3	0.7	3.1
559	02/05/2006	-0.8	4.7	5.2	4.6	3.4	2.5	1	3.2
1159	02/05/2006	1.2	4.1	4.7	4.5	3.5	2.7	1.3	3.3
1759	02/05/2006	2.9	4.3	4.2	4	3.3	2.6	1.4	3
2359	02/05/2006	-0.4	4.1	4	3.7	3.1	2.5	1.6	2.9
559	03/05/2006	-6.4	3.3	3.8	3.7	3.3	2.8	2	3.1
1159	03/05/2006	4.8	3	3.7	3.9	3.5	3.1	2.4	3.2
1759	03/05/2006	7.9	6.9	3.9	3.4	3.1	2.8	2.1	2.9
2359	03/05/2006	3	7.4	4.9	3.6	3	2.8	2.2	2.9
559	04/05/2006	3.9	5.7	5.2	4.3	3.5	3.1	2.6	3.3
1159	04/05/2006	14.6	5.5	5.3	4.9	4.1	3.7	3.2	3.7
1759	04/05/2006	18.3	7.9	4.5	3.6	2.9	2.5	2	2.5
2359	04/05/2006	8.7	8.7	5.7	4	3.1	2.7	2.3	2.6
559	05/05/2006	1.8	7.4	6.3	5	3.9	3.4	3	3.3
1159	05/05/2006	17.3	7.1	6.5	5.7	4.7	4.2	3.6	3.7
1759	05/05/2006	25.6	10.3	5.9	4.5	3.6	3.1	2.6	2.6
2359	05/05/2006	15.6	11	7	4.9	3.6	3.1	2.6	2.6
559	06/05/2006	6.5	9.5	7.5	5.7	4.2	3.6	3.1	3
1159	06/05/2006	20.6	9.2	7.9	6.7	5.2	4.6	3.9	3.6
1759	06/05/2006	22	12	7.6	5.8	4.5	3.9	3.2	2.9
2359	06/05/2006	10	11.9	8.5	6.3	4.7	4	3.4	2.9
559	07/05/2006	4.4	10.1	8.6	6.8	5.1	4.5	3.8	3.1
1159	07/05/2006	19.2	9.2	8.1	7	5.5	4.7	4	3.1
1759	07/05/2006	19.1	13.3	8.6	6.8	5.4	4.7	4	3
2359	07/05/2006	8.3	13.1	9.5	7.1	5.5	4.8	4.1	3
559	08/05/2006	4.7	11.3	9.9	8.1	6.4	5.7	5	3.7
1159	08/05/2006	16.7	9.2	8.1	6.9	5.3	4.6	3.7	2.3
1759	08/05/2006	8.5	11.8	9.2	7.8	6.4	5.7	4.8	3.3
2359	08/05/2006	7.2	10.7	9.5	8.1	6.7	6	5.2	3.5
559	09/05/2006	5.2	9.4	9.1	8.2	6.9	6.2	5.4	3.6
1159	09/05/2006	6.5	8.9	8.8	8.2	7.2	6.5	5.6	3.7
1759	09/05/2006	8.6	9.3	8.4	7.9	7	6.4	5.6	3.5
2359	09/05/2006	7.7	9.4	8.6	7.9	7.1	6.5	5.7	3.6
559	10/05/2006	5.4	8.7	8.5	8	7.2	6.7	6	3.7
1159	10/05/2006	10.2	8.5	8.2	7.8	7.2	6.7	5.9	3.6
1759	10/05/2006	13.2	11.3	8.3	7.3	6.7	6.2	5.5	3.1
2359	10/05/2006	8.1	12	9.5	8.1	7.2	6.8	6.1	3.7
559	11/05/2006	6.8	10.7	10	8.9	7.9	7.4	6.7	4.3
1159	11/05/2006	14	9.8	8.9	8.2	7.3	6.7	6	3.5
1759	11/05/2006	14.5	13.9	9.7	8.2	7.3	6.8	6.1	3.5
2359	11/05/2006	9.7	13.9	10.7	8.6	7.3	6.8	6.1	3.6
559	12/05/2006	2.8	11.5	10.6	9.1	7.7	7.1	6.4	3.8
1159	12/05/2006	15.4	11.1	10.3	9.5	8.2	7.5	6.8	4
1759	12/05/2006	15.6	14.7	10.5	9	7.8	7.2	6.4	3.6
2359	12/05/2006	12.5	14.9	11.9	9.9	8.5	7.9	7.1	4.2
559	13/05/2006	11.1	12.8	11.7	10.2	8.7	8	7.2	4.2
1159	13/05/2006	16.4	12.4	11.6	10.6	9.3	8.5	7.7	4.5
1759	13/05/2006	16.5	14.3	11	9.7	8.5	7.8	6.9	3.8
2359	13/05/2006	6.4	14.1	11.9	10.3	9	8.3	7.5	4.2
559	14/05/2006	1.9	12.2	11.5	10.4	9	8.3	7.5	4.2
1159	14/05/2006	9.6	12.1	11.7	11.1	10	9.3	8.4	4.9
1759	14/05/2006	8.5	15	12.2	11.1	10.1	9.4	8.6	5
2359	14/05/2006	9	13.4	11.7	10.4	9.3	8.7	7.8	4.2
559	15/05/2006	5.4	11.7	11.8	11	9.9	9.3	8.5	4.8
1159	15/05/2006	15.4	11.5	11.4	11	10.1	9.5	8.6	4.9
1759	15/05/2006	18.8	15.7	11.4	10.2	9.3	8.8	8	4.2
2359	15/05/2006	11.6	15.8	12.7	10.8	9.7	9.1	8.4	4.5
559	16/05/2006	3.3	13.9	13	11.7	10.4	9.9	9.1	5.2
1159	16/05/2006	14.5	12.8	12.1	11.5	10.3	9.6	8.8	4.8
1759	16/05/2006	19.9	18	13.1	11.6	10.6	9.9	9.1	5.1
2359	16/05/2006	12.2	17	13.5	11.4	10	9.4	8.5	4.5
559	17/05/2006	11.8	14.8	13.5	11.9	10.4	9.7	8.9	4.8
1159	17/05/2006	18.7	14.6	13.7	12.7	11.3	10.5	9.7	5.4
1759	17/05/2006	26.7	17.2	13.4	12.1	10.8	10.1	9.2	5
2359	17/05/2006	17	17.1	13.9	12	10.5	9.9	9	4.7
559	18/05/2006	5.5	15.8	14.6	13.2	11.7	11	10.1	5.7
1159	18/05/2006	16.2	14.8	13.9	13.1	11.7	11	10	5.5
1759	18/05/2006	18.7	18.4	13.9	12.3	11.1	10.4	9.4	4.8

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
2359	18/05/2006	11.5	17.7	14.7	12.6	11.2	10.5	9.6	4.9
559	19/05/2006	4.2	15.3	14.7	13.3	11.8	11	10.1	5.4
1159	19/05/2006	5.7	14.2	14	13.2	11.9	11.2	10.2	5.4
1759	19/05/2006	8.3	16.2	13.8	12.9	11.9	11.2	10.2	5.3
2359	19/05/2006	5.1	15.9	14.2	13	11.9	11.2	10.3	5.3
559	20/05/2006	0.3	13.7	14.2	13.5	12.4	11.8	10.9	5.9
1159	20/05/2006	6.9	12.3	13.3	13.2	12.3	11.7	10.8	5.7
1759	20/05/2006	7.6	13.6	13	12.8	12.2	11.6	10.7	5.6
2359	20/05/2006	5.7	13	13.1	12.8	12.3	11.8	10.9	5.8
559	21/05/2006	2.8	11.5	12.7	12.7	12.3	11.8	11	5.9
1159	21/05/2006	5.3	10.8	12.4	12.8	12.5	12.1	11.3	6.1
1759	21/05/2006	12.4	12.1	12.4	12.8	12.7	12.4	11.6	6.4
2359	21/05/2006	12.1	12.5	11.9	11.8	11.8	11.5	10.8	5.8
559	22/05/2006	12.1	11.6	11.9	11.9	11.8	11.5	10.9	5.9
1159	22/05/2006	16.5	12.5	12.3	12.4	12.3	12	11.4	6.4
1759	22/05/2006	20.5	17.8	12.7	11.7	11.4	11.2	10.6	5.7
2359	22/05/2006	12.7	17.8	14.1	12.1	11.3	11	10.5	5.7
559	23/05/2006	5.8	15.1	14.3	13	11.9	11.5	10.9	6.2
1159	23/05/2006	9	14.1	13.9	13.3	12.4	11.9	11.2	6.5
1759	23/05/2006	11.9	16.8	13.8	12.8	11.9	11.5	10.8	6.1
2359	23/05/2006	9.4	16	14.2	13	12	11.5	10.9	6.2
559	24/05/2006	4.5	14.3	14.1	13.3	12.3	11.8	11.1	6.4
1159	24/05/2006	4.5	13.2	13.6	13.3	12.5	12	11.3	6.6
1759	24/05/2006	4.3	13.1	13.2	13	12.4	12	11.3	6.5
2359	24/05/2006	4.9	12.6	13	13	12.5	12.1	11.4	6.6
559	25/05/2006	4.6	11.7	12.7	12.9	12.5	12.2	11.5	6.8
1159	25/05/2006	6.4	11.3	12.3	12.6	12.4	12.1	11.5	6.8
1759	25/05/2006	8.1	11.9	12	12.3	12.2	12	11.4	6.6
2359	25/05/2006	6.9	12.4	12.2	12.2	12.1	11.9	11.3	6.7
559	26/05/2006	5.4	11.6	12.2	12.3	12.2	12	11.5	6.9
1159	26/05/2006	9.6	11.6	12.3	12.6	12.5	12.3	11.8	7.2
1759	26/05/2006	4.7	13.3	11.9	11.8	11.8	11.7	11.2	6.7
2359	26/05/2006	2	12.9	12.3	12	11.8	11.7	11.2	6.8
559	27/05/2006	-0.1	11.8	13.1	13.1	12.9	12.7	12.3	7.9
1159	27/05/2006	8.3	11	11.8	12.2	12.2	12	11.5	7.2
1759	27/05/2006	8.5	16.7	12.1	11.5	11.4	11.3	10.9	6.7
2359	27/05/2006	3.9	16.2	13.4	11.9	11.4	11.3	10.9	6.8
559	28/05/2006	2	14.1	13.9	13.1	12.4	12.2	11.8	7.7
1159	28/05/2006	13.2	12.9	13.2	13	12.4	12.1	11.6	7.5
1759	28/05/2006	14.3	16.6	13.5	12.8	12.3	12	11.5	7.4
2359	28/05/2006	8.4	16.6	13.9	12.5	11.8	11.5	11.1	7.1
559	29/05/2006	2.9	14.4	14	13.1	12.2	11.8	11.4	7.4
1159	29/05/2006	14.3	13.9	13.4	13	12.2	11.8	11.3	7.3
1759	29/05/2006	12.2	18.1	14	12.7	12	11.6	11.1	7.1
2359	29/05/2006	6	17.5	14.8	13.1	12.1	11.8	11.2	7.2
559	30/05/2006	2.5	15.2	15	14	12.9	12.4	11.9	7.8
1159	30/05/2006	7.6	14	14.1	13.7	12.8	12.3	11.7	7.6
1759	30/05/2006	8.4	16.3	14.1	13.4	12.7	12.3	11.6	7.5
2359	30/05/2006	5.9	16	14.5	13.5	12.7	12.3	11.7	7.5
559	31/05/2006	4.7	14.7	15.2	14.7	13.8	13.4	12.8	8.6
1159	31/05/2006	15.6	14	14	13.9	13.2	12.8	12.1	7.9
1759	31/05/2006	16.8	18.6	14.4	13.4	12.8	12.4	11.8	7.6
2359	31/05/2006	14.4	18.3	15.3	13.6	12.7	12.4	11.8	7.6
559	01/06/2006	10.2	16.7	16.1	15	13.9	13.4	12.8	8.6
1159	01/06/2006	22.1	16.1	15.4	14.8	13.8	13.3	12.6	8.3
1759	01/06/2006	27.2	20.6	15.8	14.3	13.4	12.9	12.3	7.9
2359	01/06/2006	18.3	19.6	16.2	14.2	12.9	12.5	11.8	7.5
559	02/06/2006	12.6	18.1	17.1	15.7	14.3	13.7	13.1	8.7
1159	02/06/2006	25.3	17.2	16.1	15.3	14	13.4	12.7	8.2
1759	02/06/2006	28.4	20.9	16.3	14.7	13.6	13	12.3	7.7
2359	02/06/2006	21.5	20.3	17	15	13.6	13.1	12.3	7.7
559	03/06/2006	14.8	18.4	17.1	15.6	14.2	13.5	12.8	8.2
1159	03/06/2006	12.5	17	15.8	14.8	13.4	12.8	12	7.3
1759	03/06/2006	12.2	17.8	16.4	15.5	14.3	13.6	12.8	8
2359	03/06/2006	9.3	17.3	16.5	15.7	14.6	14	13.2	8.3
559	04/06/2006	12.6	15.7	16.6	16.2	15.3	14.6	13.8	8.8
1159	04/06/2006	16.9	15.2	15.5	15.6	14.9	14.3	13.5	8.4
1759	04/06/2006	18.4	19	15.9	15.2	14.6	14.1	13.4	8.3
2359	04/06/2006	11.9	18.8	16.5	15.3	14.5	14.1	13.4	8.3
559	05/06/2006	8.2	17	17.2	16.4	15.5	15	14.3	9.2
1159	05/06/2006	17.6	15.8	15.8	15.6	14.9	14.4	13.6	8.5
1759	05/06/2006	15.7	18.5	15.4	14.4	13.7	13.3	12.5	7.4
2359	05/06/2006	4.8	18.6	16.7	15.5	14.6	14.2	13.4	8.3

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
559	06/06/2006	-2.1	17.1	17.6	17	16	15.5	14.8	9.6
1159	06/06/2006	5	14.9	15.9	15.9	15.2	14.7	14	8.8
1759	06/06/2006	5.8	16.7	15.6	15.4	14.9	14.5	13.8	8.6
2359	06/06/2006	6.3	16.6	16	15.5	15	14.6	13.9	8.7
559	07/06/2006	1.2	15.2	16	15.9	15.4	15	14.4	9.2
1159	07/06/2006	10.9	14.9	15.8	16	15.7	15.4	14.7	9.4
1759	07/06/2006	12.3	18.1	16.1	15.8	15.6	15.3	14.6	9.4
2359	07/06/2006	10.5	17.6	15.8	14.9	14.5	14.2	13.6	8.5
559	08/06/2006	11	16.3	16.6	16.1	15.5	15.2	14.6	9.5
1159	08/06/2006	16.6	15.5	15.5	15.4	15	14.6	14	9
1759	08/06/2006	17.3	19.1	15.9	15.2	14.7	14.4	13.9	8.8
2359	08/06/2006	12.6	19	16.7	15.5	14.8	14.5	13.9	8.9
559	09/06/2006	8.3	17.1	16.6	15.8	15	14.6	14	9.1
1159	09/06/2006	7.8	16.1	16.1	15.8	15.1	14.6	14.1	9.1
1759	09/06/2006	6.6	17.2	16.4	16	15.5	15.1	14.5	9.5
2359	09/06/2006	7.1	16.1	16.1	15.7	15.2	14.8	14.2	9.3
559	10/06/2006	6	14.6	15.7	15.8	15.3	15	14.4	9.4
1159	10/06/2006	10.7	14.4	15.3	15.5	15.3	15	14.4	9.4
1759	10/06/2006	11.9	15.7	15	15	14.9	14.6	14.1	9.1
2359	10/06/2006	7.5	16	15.5	15.2	15	14.8	14.3	9.4
559	11/06/2006	5.7	14.6	15.4	15.4	15.1	14.9	14.4	9.6
1159	11/06/2006	9.2	14.7	15.6	15.9	15.8	15.5	15	10.2
1759	11/06/2006	10.6	16.8	15.6	15.6	15.5	15.3	14.9	10
2359	11/06/2006	9.2	17	15.8	15.3	15.1	15	14.5	9.8
559	12/06/2006	7.1	15.4	15.5	15.3	15	14.8	14.4	9.8
1159	12/06/2006	16.2	15.6	15.6	15.6	15.3	15.1	14.6	10
1759	12/06/2006	14.1	19.3	15.5	14.9	14.6	14.4	13.9	9.4
2359	12/06/2006	11.6	19.6	16.6	15.2	14.6	14.4	14	9.5
559	13/06/2006	10.1	17.8	17.5	16.6	15.8	15.5	15	10.5
1159	13/06/2006	20.6	17.1	16.7	16.3	15.6	15.2	14.7	10.2
1759	13/06/2006	22.3	20.3	16.6	15.5	14.9	14.5	14	9.6
2359	13/06/2006	17.6	20.4	17.4	15.9	15	14.6	14.1	9.7
559	14/06/2006	16.6	18.8	17.9	16.8	15.7	15.3	14.7	10.3
1159	14/06/2006	25	18.3	17.6	16.9	16	15.5	14.9	10.4
1759	14/06/2006	28.1	22.2	17.8	16.5	15.6	15.1	14.5	10
2359	14/06/2006	21.5	22	18.3	16.4	15.2	14.7	14.1	9.6
559	15/06/2006	14.6	20.4	19.2	17.7	16.4	15.8	15.2	10.6
1159	15/06/2006	26.8	19.6	18.4	17.6	16.4	15.7	15	10.3
1759	15/06/2006	28.2	23	18.9	17.5	16.4	15.8	15.1	10.4
2359	15/06/2006	20.6	22.4	19.1	17.2	15.9	15.3	14.5	9.8
559	16/06/2006	15.5	20.6	19.4	18	16.6	16	15.2	10.4
1159	16/06/2006	26.1	20.2	19.2	18.3	17	16.3	15.5	10.5
1759	16/06/2006	25.5	23.2	19.6	18.2	17.1	16.4	15.6	10.5
2359	16/06/2006	14.6	22.5	19.5	17.7	16.4	15.8	14.9	9.9
559	17/06/2006	14	21	20.1	18.8	17.4	16.7	15.9	10.7
1159	17/06/2006	21.7	20.3	19.2	18.3	17.1	16.4	15.5	10.2
1759	17/06/2006	23.5	22.4	19.2	17.9	16.8	16.1	15.2	9.9
2359	17/06/2006	13.8	22	19.9	18.5	17.5	16.8	16	10.4
559	18/06/2006	15.1	20	19.9	19.1	18	17.3	16.5	10.8
1159	18/06/2006	21.2	20.5	19.9	19.4	18.5	17.8	17	11.2
1759	18/06/2006	21.4	22.2	18.9	17.8	16.9	16.3	15.5	9.8
2359	18/06/2006	16	21.6	19.8	18.5	17.5	16.9	16.1	10.4
559	19/06/2006	14.4	19.8	19.6	18.8	17.8	17.2	16.4	10.6
1159	19/06/2006	14.4	19	19.3	19	18.1	17.5	16.7	10.9
1759	19/06/2006	18.1	20.8	19.7	19.4	18.7	18.1	17.3	11.4
2359	19/06/2006	11.6	19.8	18.9	18.2	17.6	17.1	16.3	10.4
559	20/06/2006	9.7	18.7	19.8	19.6	18.9	18.4	17.6	11.7
1159	20/06/2006	19.5	18.4	19	19.1	18.7	18.2	17.4	11.4
1759	20/06/2006	13.6	18.8	16.8	16.3	15.9	15.5	14.7	8.8
2359	20/06/2006	11.2	19.6	18.8	18.1	17.6	17.2	16.5	10.7
559	21/06/2006	9.2	18	18.7	18.5	17.9	17.5	16.9	11
1159	21/06/2006	10.9	17.3	18.3	18.4	18	17.6	16.9	11.1
1759	21/06/2006	14	17.8	17.8	17.9	17.7	17.3	16.7	10.8
2359	21/06/2006	11.7	17.7	18	17.9	17.7	17.4	16.8	11.1
559	22/06/2006	7.1	16.9	17.9	18	17.9	17.6	17	11.3
1159	22/06/2006	19.5	17.3	17.7	18.1	18	17.8	17.2	11.4
1759	22/06/2006	23.5	20.9	18.1	17.7	17.6	17.4	16.9	11.2
2359	22/06/2006	13.4	20.7	18.7	17.7	17.3	17.1	16.6	11.1
559	23/06/2006	9.7	19	19.5	19	18.4	18.1	17.5	12
1159	23/06/2006	20.6	18.3	18.5	18.5	18	17.6	17.1	11.6
1759	23/06/2006	21.4	21.6	19.2	18.5	18.1	17.8	17.2	11.7
2359	23/06/2006	9	20.5	18.9	17.9	17.3	17	16.5	11.1
559	24/06/2006	8.1	18.9	19.9	19.4	18.7	18.3	17.7	12.3

## MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
Time	Date	5	20	30	45	70	90	100	180
1159	24/06/2006	21.4	18.3	18.8	18.9	18.4	18	17.4	12
1759	24/06/2006	24.5	21.9	18.6	17.9	17.5	17.2	16.6	11.3
2359	24/06/2006	17.9	21.7	19.5	18.3	17.6	17.3	16.7	11.4
559	25/06/2006	13.9	20.3	20.1	19.2	18.4	18	17.4	12.1
1159	25/06/2006	19	19.5	19.2	18.9	18.1	17.7	17	11.7
1759	25/06/2006	20.6	23.5	19.8	18.7	18	17.6	17	11.7
2359	25/06/2006	12.5	22.4	20	18.5	17.5	17	16.4	11.1
559	26/06/2006	6.7	20.6	21	20.1	19	18.5	17.8	12.5
1159	26/06/2006	20.1	20	20.1	19.9	19	18.4	17.7	12.3
1759	26/06/2006	26.3	24.7	20.4	19.3	18.6	18	17.4	11.9
2359	26/06/2006	18.8	23.9	20.9	19.2	18.1	17.6	16.9	11.5
559	27/06/2006	15.9	21.9	21.4	20.3	19	18.4	17.7	12.3
1159	27/06/2006	28.3	22.2	21.4	20.8	19.7	19	18.3	12.7
1759	27/06/2006	34.8	26.3	21.6	20.2	19.1	18.5	17.7	12.2
2359	27/06/2006	25.4	25.2	22.1	20.1	18.7	18.1	17.4	11.7
559	28/06/2006	18.3	23.8	22.9	21.5	20	19.4	18.6	12.8
1159	28/06/2006	23.7	23	22.5	21.7	20.4	19.6	18.7	12.9
1759	28/06/2006	24.2	25.6	21.6	20.3	19.1	18.4	17.5	11.7
2359	28/06/2006	14.5	25.2	22.4	20.6	19.1	18.5	17.6	11.7
559	29/06/2006	13	22.9	22.5	21.4	19.9	19.2	18.3	12.3
1159	29/06/2006	15	21.4	22.1	21.6	20.5	19.7	18.8	12.6
1759	29/06/2006	16.4	24.3	21.7	21	20	19.3	18.4	12.2
2359	29/06/2006	9.1	23.4	22	20.9	19.8	19.2	18.3	12.1
559	30/06/2006	8.3	21.3	22.4	22	20.9	20.3	19.4	13
1159	30/06/2006	18.2	21	21.6	21.7	21	20.4	19.4	13
1759	30/06/2006	17.9	23.5	21	20.4	19.8	19.3	18.4	12
2359	30/06/2006	10.3	22.4	21.3	20.4	19.6	19.1	18.3	11.9
559	01/07/2006	7.7	20.7	21.5	21.1	20.4	19.8	19.1	12.6
1159	01/07/2006	15.9	20.5	21.6	21.7	21.1	20.6	19.8	13.3
1759	01/07/2006	14.9	22.8	20.6	20.3	19.8	19.4	18.6	12.2
2359	01/07/2006	7.5	22.6	21.3	20.4	19.8	19.4	18.7	12.3
559	02/07/2006	5.3	21.1	22.3	22	21.3	20.8	20.1	13.6
1159	02/07/2006	12.6	20.4	20.9	21.2	20.7	20.2	19.5	13.1
1759	02/07/2006	10.9	25.2	21.4	20.6	20.1	19.8	19	12.7
2359	02/07/2006	11.8	24.2	22.1	20.8	20	19.6	18.9	12.6
559	03/07/2006	3.9	22	22.9	22.2	21.3	20.8	20.1	13.8
1159	03/07/2006	16.1	21	21.5	21.6	20.9	20.4	19.6	13.3
1759	03/07/2006	22	25.4	21.6	20.6	20.1	19.6	18.9	12.6
2359	03/07/2006	17.1	24.6	22.4	21	20.1	19.7	19	12.7
559	04/07/2006	13.7	22.5	22.6	21.9	20.8	20.3	19.6	13.4
1159	04/07/2006	22.5	22.8	22.7	22.5	21.6	21.1	20.3	13.9
1759	04/07/2006	28.9	26.3	22.3	21.1	20.4	19.9	19.1	12.8
2359	04/07/2006	19.9	25.1	22.9	21.4	20.3	19.8	19.1	12.8
559	05/07/2006	11.4	22.6	22.6	21.8	20.6	20.1	19.3	13
1159	05/07/2006	18.4	22.6	22.8	22.5	21.5	20.9	20.1	13.7
1759	05/07/2006	21.1	25	22.4	21.6	20.8	20.3	19.5	13.1
2359	05/07/2006	11.9	23.6	22.9	21.9	21	20.5	19.7	13.3
559	06/07/2006	11.5	21.6	22.4	22.1	21.2	20.7	19.9	13.5
1159	06/07/2006	15.8	21.5	22.1	22.2	21.6	21	20.2	13.7
1759	06/07/2006	16.6	24.1	22.1	21.5	21	20.6	19.8	13.4
2359	06/07/2006	17.8	23	22.4	21.7	21.1	20.7	19.9	13.5
559	07/07/2006	12.9	21.7	22.1	21.8	21.2	20.8	20	13.6
1159	07/07/2006	13.8	21.1	21.5	21.5	21	20.6	19.9	13.5
1759	07/07/2006	11.2	20.8	21.4	21.5	21.1	20.8	20.1	13.7
2359	07/07/2006	10.8	20	21.1	21.3	21.1	20.8	20.1	13.7
559	08/07/2006	10.2	19.1	20.8	21.2	21.2	20.9	20.2	13.9
1159	08/07/2006	14.7	19	20.8	21.5	21.6	21.3	20.7	14.4
1759	08/07/2006	16.8	20.4	20.2	20.6	20.8	20.6	20	13.9
2359	08/07/2006	14.9	20.5	20.4	20.4	20.5	20.4	19.9	13.8
559	09/07/2006	11.1	19.1	20.3	20.5	20.6	20.5	20	14
1159	09/07/2006	19.9	19.4	20.4	20.8	20.9	20.8	20.3	14.3
1759	09/07/2006	15.2	23.1	20.3	20.1	20.2	20.1	19.7	13.9
2359	09/07/2006	12.8	22.2	20.9	20.2	20	19.9	19.5	13.8
559	10/07/2006	11.1	20.1	20.9	20.7	20.4	20.2	19.8	14.2
1159	10/07/2006	15.2	20.1	20.5	20.7	20.5	20.3	19.8	14.2
1759	10/07/2006	15.3	21.5	20.5	20.3	20.1	20	19.6	14.1
2359	10/07/2006	11.6	20.2	20.6	20.4	20.2	20	19.6	14.2
559	11/07/2006	9.7	18.4	20	20.3	20.3	20.1	19.7	14.3
1159	11/07/2006	10.4	17.4	19.2	19.9	20.3	20.3	19.9	14.5
1759	11/07/2006	12.4	17.9	18.6	19.2	19.8	19.9	19.6	14.4
2359	11/07/2006	10	17.2	18.5	19	19.6	19.7	19.5	14.6
559	12/07/2006	4.9	16	18.3	19.1	19.7	19.9	19.8	15
1159	12/07/2006	15.4	16.7	18.7	19.7	20.4	20.5	20.4	15.8

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1759	12/07/2006	18.7	19.4	17.9	18.2	18.9	19.1	19.1	14.8
2359	12/07/2006	14.3	19.1	18.5	18.3	18.6	18.9	18.8	14.7
559	13/07/2006	8.3	17.9	18.7	18.8	19	19.2	19.2	15.2
1159	13/07/2006	18.9	18	18.4	18.8	19	19.1	19	15.1
1759	13/07/2006	18.4	20	18.4	18.1	18.3	18.4	18.3	14.6
2359	13/07/2006	11.4	19.8	19.1	18.7	18.6	18.7	18.6	15
559	14/07/2006	7.9	18.7	19.5	19.5	19.3	19.3	19.2	15.7
1159	14/07/2006	17.1	18	18.8	19.2	19.2	19.1	19	15.4
1759	14/07/2006	14.5	21.2	18.8	18.5	18.5	18.5	18.4	14.9
2359	14/07/2006	6.6	20.4	19.6	18.9	18.7	18.6	18.5	15.1
559	15/07/2006	6.9	18.2	19.2	19.1	18.8	18.7	18.6	15.2
1159	15/07/2006	16.6	18.5	19.2	19.6	19.4	19.3	19.1	15.6
1759	15/07/2006	16.3	22	19.3	18.8	18.7	18.6	18.4	15
2359	15/07/2006	8.6	20.7	19.8	19	18.6	18.6	18.4	15
559	16/07/2006	8.1	18.5	19.5	19.4	19	18.8	18.6	15.3
1159	16/07/2006	16.8	18.4	19.6	20	19.8	19.6	19.3	15.9
1759	16/07/2006	24.4	20.7	19.3	19.1	19.1	18.9	18.7	15.3
2359	16/07/2006	14.2	20.6	19.5	18.9	18.7	18.6	18.4	15
559	17/07/2006	12.1	19.3	20.2	20	19.7	19.5	19.3	15.9
1159	17/07/2006	22.5	19.2	19.6	19.9	19.7	19.5	19.2	15.8
1759	17/07/2006	21.3	22.5	19.6	19	18.8	18.7	18.5	15.1
2359	17/07/2006	14.3	22.1	20.3	19.2	18.8	18.6	18.4	15
559	18/07/2006	7	19.8	20.2	19.7	19.1	18.9	18.6	15.3
1159	18/07/2006	16.6	19.7	20.1	20.1	19.7	19.4	19.1	15.6
1759	18/07/2006	14.6	22	21	20.6	20.2	20	19.6	16.1
2359	18/07/2006	9.4	20.5	20.1	19.7	19.2	19.1	18.8	15.3
559	19/07/2006	8.7	19.2	20.3	20.3	19.9	19.7	19.4	15.8
1159	19/07/2006	18.6	19.1	19.9	20.3	20.1	19.9	19.5	16
1759	19/07/2006	21.3	23	20	19.5	19.4	19.2	18.9	15.3
2359	19/07/2006	15.6	22.5	20.5	19.3	18.8	18.7	18.4	14.9
559	20/07/2006	9.3	20.7	21	20.5	19.9	19.6	19.3	15.8
1159	20/07/2006	23.7	20.3	20.7	20.7	20.2	19.9	19.5	15.9
1759	20/07/2006	27.1	24.1	20.9	20	19.6	19.3	19	15.4
2359	20/07/2006	16.6	23.7	21.4	20	19.3	19.1	18.8	15.2
559	21/07/2006	12.5	21.6	21.6	20.8	20	19.7	19.3	15.7
1159	21/07/2006	25.5	21.5	21.6	21.4	20.7	20.3	19.8	16.1
1759	21/07/2006	29.6	24.7	21.6	20.6	20	19.7	19.2	15.5
2359	21/07/2006	16.7	24.1	21.9	20.5	19.7	19.4	19	15.2
559	22/07/2006	15.3	22	22.1	21.4	20.4	20	19.6	15.8
1159	22/07/2006	29.3	22.4	22.4	22.2	21.4	21	20.4	16.5
1759	22/07/2006	32.4	25.6	21.9	20.8	20.1	19.7	19.2	15.3
2359	22/07/2006	16.9	24.9	22.5	20.9	19.9	19.6	19.1	15.1
559	23/07/2006	13.3	23	23.1	22.2	21.1	20.6	20.1	16
1159	23/07/2006	21.9	22.5	22.9	22.7	21.8	21.2	20.7	16.4
1759	23/07/2006	30.2	24.8	22.3	21.6	20.9	20.4	19.8	15.6
2359	23/07/2006	19.4	24	22.1	20.8	19.9	19.5	18.9	14.7
559	24/07/2006	14.4	22.6	22.5	21.7	20.8	20.4	19.8	15.5
1159	24/07/2006	19.4	22	22.7	22.5	21.8	21.3	20.7	16.2
1759	24/07/2006	25.4	23.9	22	21.5	21	20.5	19.9	15.4
2359	24/07/2006	16.8	23.5	22.1	21.2	20.6	20.2	19.7	15.2
559	25/07/2006	12.6	21.6	22.4	22	21.3	20.9	20.4	15.8
1159	25/07/2006	19.5	19.5	20.5	20.6	20.2	19.8	19.2	14.7
1759	25/07/2006	16.5	22.9	21.4	21.1	20.8	20.5	19.9	15.3
2359	25/07/2006	10.6	22.2	21.8	21.3	20.9	20.6	20.1	15.5
559	26/07/2006	8.7	20.3	21.6	21.6	21.2	20.9	20.4	15.8
1159	26/07/2006	8.2	19.4	20.9	21.4	21.2	20.9	20.4	15.8
1759	26/07/2006	8.6	19.3	20.5	21	21	20.8	20.3	15.7
2359	26/07/2006	8.5	18.7	20.3	20.9	21	20.9	20.4	15.8
559	27/07/2006	8.1	18	19.9	20.7	20.9	20.9	20.4	15.9
1159	27/07/2006	9.7	18.1	19.8	20.7	21.1	21.1	20.7	16.1
1759	27/07/2006	17.5	20.9	19.9	20.2	20.6	20.6	20.3	15.8
2359	27/07/2006	7.7	20.6	20.2	20	20.2	20.3	20	15.7
559	28/07/2006	5.6	18.8	20.5	20.9	20.9	20.9	20.6	16.3
1159	28/07/2006	16.5	19	20.4	21.1	21.3	21.2	20.9	16.7
1759	28/07/2006	20.2	22	20.2	20.1	20.3	20.3	20.1	15.9
2359	28/07/2006	15.9	22	20.8	20.2	20.1	20.1	19.9	15.9
559	29/07/2006	10.9	20.2	20.6	20.4	20.2	20.1	20	16
1159	29/07/2006	12.6	19.5	20.4	20.6	20.5	20.4	20.1	16.2
1759	29/07/2006	15.2	19.8	19.9	20.1	20.1	20	19.8	15.9
2359	29/07/2006	11.6	19.3	19.7	19.8	19.7	19.7	19.5	15.6
559	30/07/2006	7.9	18.6	19.9	20.3	20.3	20.2	20	16.2
1159	30/07/2006	9	17.8	19.5	20.1	20.3	20.3	20	16.2
1759	30/07/2006	8.8	17.9	19.1	19.8	20.1	20.1	19.9	16.1

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
2359	30/07/2006	9.3	17.4	18.9	19.5	19.9	20	19.8	16.1
559	31/07/2006	5.4	16.7	18.7	19.6	20	20.1	20	16.4
1159	31/07/2006	10.8	16.1	17.7	18.8	19.3	19.4	19.3	15.8
1759	31/07/2006	8.4	17.3	18.2	19	19.6	19.8	19.7	16.3
2359	31/07/2006	7.4	16.6	18	18.8	19.3	19.5	19.5	16.2
559	01/08/2006	2.1	15.8	18.1	19.2	19.8	20	19.9	16.7
1159	01/08/2006	13.3	15.3	17.6	18.8	19.6	19.8	19.7	16.6
1759	01/08/2006	11.3	18.1	17.5	18.1	18.9	19.1	19.2	16.2
2359	01/08/2006	5.4	18.1	18.1	18.2	18.7	19	19.1	16.2
559	02/08/2006	0.2	16.3	18.3	18.9	19.3	19.5	19.6	16.8
1159	02/08/2006	13	15.6	17.8	18.9	19.3	19.5	19.5	16.8
1759	02/08/2006	14.1	19.1	17.9	18.4	18.9	19.1	19.2	16.6
2359	02/08/2006	6.6	18.4	18	18	18.3	18.5	18.6	16.1
559	03/08/2006	3.9	16.7	18.1	18.4	18.6	18.8	18.8	16.4
1159	03/08/2006	12.3	16.1	17.6	18.4	18.7	18.8	18.9	16.5
1759	03/08/2006	10.5	17.9	17.2	17.5	17.9	18	18.1	15.8
2359	03/08/2006	7.6	17.6	18	18.1	18.3	18.4	18.5	16.3
559	04/08/2006	7.8	16.5	17.8	18.3	18.4	18.6	18.7	16.5
1159	04/08/2006	14.4	16.9	18	18.7	19	19.1	19.1	17
1759	04/08/2006	16.3	19.5	18.5	18.6	18.9	19	19.1	16.9
2359	04/08/2006	8.7	18.7	18.5	18.4	18.5	18.6	18.7	16.6
559	05/08/2006	2.4	16.7	18.1	18.3	18.4	18.5	18.5	16.5
1159	05/08/2006	12.9	16.4	17.6	18.3	18.5	18.6	18.6	16.6
1759	05/08/2006	16.7	20	18.4	18.5	18.7	18.8	18.8	16.8
2359	05/08/2006	10.2	18.9	18.3	17.9	17.9	18	18.1	16.2
559	06/08/2006	7.2	17.4	18.6	18.7	18.6	18.6	18.7	16.8
1159	06/08/2006	17.1	16.7	17.8	18.4	18.4	18.4	18.4	16.5
1759	06/08/2006	23.9	19.6	18.3	18.2	18.3	18.4	18.3	16.5
2359	06/08/2006	13.6	19.3	18.4	17.9	17.8	17.9	17.9	16
559	07/08/2006	10.1	17.8	18.4	18.3	18.1	18.1	18.1	16.3
1159	07/08/2006	21.7	17.7	18.4	18.7	18.7	18.6	18.5	16.7
1759	07/08/2006	27.3	21.1	18.6	18.1	18.1	18	17.9	16.1
2359	07/08/2006	15.3	21.2	19.4	18.4	18.1	18.1	18	16.2
559	08/08/2006	11.1	19.5	19.4	18.9	18.3	18.3	18.2	16.4
1159	08/08/2006	18.2	19.2	19.4	19.2	18.8	18.6	18.5	16.6
1759	08/08/2006	21.2	20.5	19.2	18.8	18.5	18.4	18.2	16.3
2359	08/08/2006	19	20.4	19.6	19	18.6	18.4	18.3	16.4
559	09/08/2006	15.4	19.3	19.4	19.1	18.7	18.5	18.3	16.4
1159	09/08/2006	21.6	19.8	19.8	19.8	19.4	19.3	19.1	17
1759	09/08/2006	20.1	21.2	19.5	19	18.7	18.5	18.3	16.2
2359	09/08/2006	14.4	20.3	19.6	19	18.5	18.3	18.1	16
559	10/08/2006	5.8	18.6	19.6	19.5	19	18.8	18.6	16.5
1159	10/08/2006	19.1	17.8	19.1	19.6	19.3	19.1	18.9	16.7
1759	10/08/2006	22.8	20.5	18.9	18.7	18.6	18.5	18.2	16
2359	10/08/2006	10.6	20.4	19.6	19.1	18.8	18.7	18.5	16.2
559	11/08/2006	3.9	18.6	19.6	19.6	19.2	19.1	18.9	16.6
1159	11/08/2006	14	17.5	19	19.5	19.3	19.1	18.9	16.5
1759	11/08/2006	20.3	18.3	18.5	18.9	18.9	18.8	18.6	16.2
2359	11/08/2006	11.4	18.9	18.9	18.9	19	18.9	18.7	16.4
559	12/08/2006	6.7	17.8	18.7	18.9	18.9	18.9	18.7	16.4
1159	12/08/2006	18.2	17.5	18.6	19.1	19.2	19.2	19	16.6
1759	12/08/2006	17.1	20.4	18.8	18.7	18.8	18.8	18.7	16.3
2359	12/08/2006	7.1	19.5	19.1	18.7	18.6	18.6	18.4	16.1
559	13/08/2006	3.5	17.8	19.1	19.2	19	19	18.9	16.6
1159	13/08/2006	18.2	17.3	18.7	19.3	19.4	19.3	19.1	16.8
1759	13/08/2006	22.2	19.8	17.9	17.7	17.7	17.7	17.5	15.3
2359	13/08/2006	12.7	20.6	19.5	18.8	18.6	18.6	18.5	16.2
559	14/08/2006	8.2	18.7	19.4	19.2	18.9	18.8	18.7	16.4
1159	14/08/2006	22.2	18.3	19.2	19.5	19.3	19.2	19	16.7
1759	14/08/2006	22.3	20.8	19.3	19.1	18.9	18.9	18.7	16.4
2359	14/08/2006	14.5	20.5	19.6	19.1	18.8	18.7	18.6	16.3
559	15/08/2006	10.4	19.2	19.7	19.5	19.1	19	18.8	16.5
1159	15/08/2006	14.1	17.7	18.5	18.6	18.3	18.2	18	15.8
1759	15/08/2006	10.2	18.9	19.1	19.3	19.1	19.1	18.9	16.6
2359	15/08/2006	8.6	17.8	18.8	19	19.1	19	18.8	16.5
559	16/08/2006	7.1	16.4	18.3	18.9	19.1	19.1	18.9	16.6
1159	16/08/2006	16.8	15.6	17.4	18.3	18.7	18.7	18.6	16.3
1759	16/08/2006	20.8	17.5	17.5	18	18.5	18.6	18.5	16.2
2359	16/08/2006	6.8	17.7	18	18.3	18.7	18.8	18.8	16.6
559	17/08/2006	4.6	16.1	17.8	18.4	18.8	18.9	18.9	16.8
1159	17/08/2006	12.6	15.7	17.4	18.4	18.8	18.9	18.9	16.8
1759	17/08/2006	22.4	19.1	18.1	18.4	18.9	19	19	17
2359	17/08/2006	16.2	18.7	18.2	18.1	18.3	18.5	18.5	16.6

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
559	18/08/2006	9.9	17.5	18.1	18.2	18.3	18.4	18.4	16.6
1159	18/08/2006	22.7	17.9	18.5	19	19.1	19.2	19.2	17.3
1759	18/08/2006	30.3	19.7	18	17.7	17.8	17.9	17.9	16.1
2359	18/08/2006	11.8	19.5	18.8	18.3	18.2	18.3	18.3	16.6
559	19/08/2006	7.1	17.7	18.6	18.6	18.4	18.4	18.4	16.7
1159	19/08/2006	19.5	17.1	18.3	18.7	18.7	18.7	18.6	16.9
1759	19/08/2006	19.9	19.2	18.3	18.3	18.4	18.4	18.4	16.7
2359	19/08/2006	8.6	18.5	18.4	18.2	18.2	18.2	18.2	16.5
559	20/08/2006	5	16.9	18.2	18.4	18.4	18.4	18.4	16.7
1159	20/08/2006	15.9	16.4	17.8	18.5	18.6	18.6	18.6	16.9
1759	20/08/2006	21.7	19.4	18	18.1	18.3	18.4	18.3	16.6
2359	20/08/2006	10.4	19.1	18.4	18	18	18.1	18	16.4
559	21/08/2006	4	17.3	18.3	18.4	18.3	18.4	18.3	16.7
1159	21/08/2006	19.6	17.1	18.3	18.9	19	19	18.9	17.3
1759	21/08/2006	26.6	20.5	18.5	18.4	18.5	18.6	18.5	16.9
2359	21/08/2006	16.7	19.8	18.7	18.1	18	18.1	18	16.5
559	22/08/2006	12.2	18.2	18.7	18.5	18.2	18.2	18.2	16.6
1159	22/08/2006	22.3	18.2	18.8	19.1	18.9	18.9	18.8	17.2
1759	22/08/2006	30.9	20.9	18.6	18.2	18.1	18.1	18	16.4
2359	22/08/2006	20.3	20.9	19.6	18.7	18.4	18.4	18.3	16.7
559	23/08/2006	13.1	19.4	19.4	19	18.6	18.5	18.4	16.8
1159	23/08/2006	13.6	18.5	19.2	19.2	18.8	18.7	18.6	16.9
1759	23/08/2006	14.8	18.2	18.9	19	18.9	18.7	18.6	16.9
2359	23/08/2006	9	17.8	18.5	18.7	18.7	18.6	18.4	16.8
559	24/08/2006	6.1	16.5	18.2	18.7	18.7	18.7	18.6	16.9
1159	24/08/2006	19.8	16.5	18	18.9	19.1	19.1	18.9	17.2
1759	24/08/2006	21	19.2	17.7	17.7	18	18	17.9	16.2
2359	24/08/2006	12.9	19	18.5	18.1	18.2	18.2	18.1	16.5
559	25/08/2006	5.7	17.5	18.3	18.4	18.3	18.3	18.3	16.6
1159	25/08/2006	15	16.9	18.3	18.8	18.8	18.8	18.8	17.1
1759	25/08/2006	23.5	18.9	17.9	18	18.2	18.2	18.1	16.5
2359	25/08/2006	13.9	18.8	18.4	18.2	18.2	18.2	18.2	16.6
559	26/08/2006	8.6	17.2	18.3	18.5	18.4	18.4	18.4	16.8
1159	26/08/2006	21.8	16.9	18.1	18.6	18.7	18.7	18.6	17
1759	26/08/2006	25.1	19.1	17.9	18	18.1	18.2	18.1	16.5
2359	26/08/2006	10.6	19	18.6	18.3	18.3	18.3	18.3	16.7
559	27/08/2006	3.1	17.3	18.5	18.7	18.6	18.6	18.6	17
1159	27/08/2006	13.2	16.4	17.9	18.5	18.6	18.6	18.6	17
1759	27/08/2006	18.8	19	17.9	18	18.1	18.2	18.1	16.5
2359	27/08/2006	10.9	18.8	18.4	18.2	18.2	18.3	18.2	16.7
559	28/08/2006	11.1	17.2	18.2	18.4	18.4	18.4	18.4	16.9
1159	28/08/2006	20	17	18.1	18.6	18.7	18.7	18.7	17.1
1759	28/08/2006	29.5	19.3	18	18.1	18.2	18.2	18.2	16.7
2359	28/08/2006	18.2	19.4	18.5	18.1	18.1	18.1	18.1	16.6
559	29/08/2006	12.4	18.1	18.5	18.3	18.2	18.2	18.1	16.7
1159	29/08/2006	17.6	18.2	19	19.2	19.1	19.1	19	17.5
1759	29/08/2006	19	18.9	18.2	18.3	18.3	18.3	18.2	16.8
2359	29/08/2006	11.5	18.7	18.5	18.3	18.2	18.2	18.2	16.7
559	30/08/2006	8.1	17.7	18.5	18.5	18.4	18.4	18.4	16.9
1159	30/08/2006	10.4	16.9	18.3	18.7	18.7	18.7	18.6	17.2
1759	30/08/2006	9.9	16.7	17.7	18.2	18.4	18.4	18.4	16.9
2359	30/08/2006	8.8	16.2	17.5	18.1	18.4	18.5	18.4	17
559	31/08/2006	4.8	15.4	17.3	18.1	18.4	18.5	18.5	17.1
1159	31/08/2006	9.4	15	17	18	18.5	18.6	18.6	17.2
1759	31/08/2006	16.6	15.5	16.4	17.2	17.8	18	18	16.6
2359	31/08/2006	4.6	15.6	16.7	17.3	17.9	18.1	18.2	16.9
559	01/09/2006	2.7	14.2	16.5	17.5	18	18.3	18.4	17.2
1159	01/09/2006	17	14.1	16.4	17.7	18.4	18.6	18.7	17.5
1759	01/09/2006	25.4	16.3	15.9	16.6	17.3	17.7	17.8	16.7
2359	01/09/2006	13.5	16.6	16.6	16.8	17.4	17.7	17.9	16.9
559	02/09/2006	8.8	15.3	16.5	16.9	17.3	17.6	17.8	16.9
1159	02/09/2006	24.2	15.6	16.8	17.6	18.1	18.3	18.5	17.6
1759	02/09/2006	35.3	18.4	16.6	16.7	17.1	17.4	17.5	16.7
2359	02/09/2006	18.5	18.4	17.2	16.7	16.9	17.1	17.3	16.6
559	03/09/2006	10	17	17.4	17.2	17.2	17.3	17.5	16.9
1159	03/09/2006	24.2	16.5	17.3	17.6	17.7	17.8	17.9	17.2
1759	03/09/2006	33.8	19.1	17.2	17	17.1	17.1	17.2	16.6
2359	03/09/2006	16.8	18.8	17.7	17	16.8	16.9	17	16.4
559	04/09/2006	8.1	17.4	17.9	17.6	17.3	17.4	17.4	16.8
1159	04/09/2006	23.6	17.1	17.9	18.2	18.1	18	18.1	17.4
1759	04/09/2006	30.7	19.3	17.5	17.2	17.1	17.1	17.1	16.4
2359	04/09/2006	14.5	19.4	18.3	17.7	17.4	17.4	17.4	16.8
559	05/09/2006	8.4	17.7	18.1	17.8	17.5	17.4	17.4	16.7



MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1159	05/09/2006	17.8	17.2	18.1	18.3	18.1	18	18	17.3
1759	05/09/2006	28.8	19	17.8	17.7	17.6	17.5	17.5	16.7
2359	05/09/2006	15.5	18.9	18.2	17.7	17.5	17.5	17.5	16.7
559	06/09/2006	11	17.6	18.1	18	17.8	17.7	17.7	16.8
1159	06/09/2006	23	17.3	18.3	18.6	18.4	18.4	18.3	17.4
1759	06/09/2006	26.7	18.2	17.7	17.7	17.6	17.6	17.5	16.6
2359	06/09/2006	14.6	18.1	18	17.9	17.8	17.8	17.7	16.8
559	07/09/2006	5	17	17.9	18	17.9	17.9	17.8	16.9
1159	07/09/2006	12.3	16.6	17.9	18.4	18.4	18.4	18.3	17.3
1759	07/09/2006	19.2	17	17.1	17.4	17.6	17.6	17.5	16.5
2359	07/09/2006	10	17	17.4	17.6	17.7	17.8	17.7	16.8
559	08/09/2006	4	15.6	17.2	17.6	17.8	17.9	17.8	16.9
1159	08/09/2006	14.8	15.4	17.2	18	18.3	18.4	18.4	17.4
1759	08/09/2006	25.1	17.3	16.7	17.1	17.5	17.6	17.6	16.6
2359	08/09/2006	15.7	17.5	17.3	17.3	17.5	17.7	17.7	16.8
559	09/09/2006	11.6	16.4	17.3	17.5	17.6	17.7	17.8	16.9
1159	09/09/2006	18.6	16.1	17.3	17.8	18	18.1	18.2	17.3
1759	09/09/2006	28.7	17.9	17	17.2	17.4	17.5	17.5	16.7
2359	09/09/2006	17.9	17.9	17.4	17.2	17.3	17.4	17.5	16.7
559	10/09/2006	10.8	16.7	17.4	17.5	17.5	17.6	17.7	16.9
1159	10/09/2006	20.5	16.9	18	18.5	18.6	18.6	18.7	17.8
1759	10/09/2006	20.2	18.2	17.3	17.3	17.5	17.6	17.6	16.8
2359	10/09/2006	14.6	17.7	17.7	17.5	17.6	17.6	17.7	16.9
559	11/09/2006	9.2	16.4	17.4	17.6	17.6	17.6	17.7	16.9
1159	11/09/2006	19.7	15.8	17.3	17.9	18	18	18.1	17.3
1759	11/09/2006	23.9	16.9	16.7	17	17.3	17.3	17.3	16.6
2359	11/09/2006	7.2	16.7	17.1	17.2	17.4	17.5	17.5	16.8
559	12/09/2006	1.7	15.1	16.9	17.4	17.6	17.7	17.8	17.1
1159	12/09/2006	20.1	14.2	16.5	17.5	17.8	17.9	18	17.2
1759	12/09/2006	21.8	15.8	16	16.6	17.1	17.2	17.3	16.6
2359	12/09/2006	4	15.6	16.4	16.8	17.2	17.4	17.5	16.8
559	13/09/2006	-2.7	14.2	16.3	17	17.4	17.6	17.8	17.1
1159	13/09/2006	12.9	13.4	15.8	17.1	17.6	17.8	17.9	17.3
1759	13/09/2006	12.2	15	15.3	16	16.7	16.9	17.1	16.5
2359	13/09/2006	3.5	15.3	16	16.5	17	17.3	17.5	17
559	14/09/2006	1.8	14.2	16	16.7	17.1	17.4	17.6	17.2
1159	14/09/2006	1.1	13.2	15.5	16.5	17.1	17.4	17.6	17.2
1759	14/09/2006	6.4	13.4	15	16.1	16.8	17.2	17.3	17
2359	14/09/2006	1.3	12.7	15	16.1	16.8	17.2	17.4	17.2
559	15/09/2006	1.4	11.5	14.6	16	16.9	17.2	17.5	17.3
1159	15/09/2006	4.6	11.4	14.1	15.8	16.8	17.3	17.5	17.4
1759	15/09/2006	10.9	12.6	13.6	14.9	16	16.4	16.7	16.7
2359	15/09/2006	3.4	12.3	14.1	15.1	16.1	16.6	17	17.1
559	16/09/2006	0.6	11.1	13.8	15.1	16.1	16.6	17	17.2
1159	16/09/2006	2.9	11.2	14.1	15.7	16.7	17.2	17.6	17.9
1759	16/09/2006	7	11.9	13.1	14.4	15.6	16.1	16.5	17
2359	16/09/2006	-0.3	11.7	13.4	14.5	15.6	16.1	16.6	17.1
559	17/09/2006	-0.2	10.6	13.2	14.4	15.5	16	16.5	17.2
1159	17/09/2006	3.1	10.2	12.9	14.4	15.5	16	16.5	17.3
1759	17/09/2006	5.2	11	12.5	13.8	15	15.6	16.1	17
2359	17/09/2006	4	10.9	12.5	13.6	14.8	15.4	16	17
559	18/09/2006	3.9	10.5	12.5	13.7	14.9	15.4	16	17.2
1159	18/09/2006	5.3	10.6	12.6	13.9	15	15.6	16.1	17.4
1759	18/09/2006	10.7	11	11.8	12.8	13.9	14.5	15.1	16.5
2359	18/09/2006	4.5	11.3	12.4	13.2	14.2	14.8	15.5	17
559	19/09/2006	-2.1	9.8	12	13.1	14	14.6	15.2	16.8
1159	19/09/2006	7.7	9.8	12.4	13.8	14.8	15.3	16	17.6
1759	19/09/2006	11.5	11.3	11.6	12.6	13.7	14.3	14.9	16.7
2359	19/09/2006	7.8	11.7	12.2	12.9	13.8	14.3	15	16.9
559	20/09/2006	1.8	11	12.2	12.9	13.7	14.2	14.8	16.8
1159	20/09/2006	7.8	10.6	12.2	13.1	13.9	14.3	15	17
1759	20/09/2006	9.3	11.7	12	12.7	13.5	14	14.6	16.8
2359	20/09/2006	9.2	11.7	12.3	12.8	13.5	14	14.6	16.8
559	21/09/2006	6.8	11.3	12.3	12.9	13.5	14	14.6	16.9
1159	21/09/2006	9.6	11.4	12.6	13.3	13.9	14.4	15	17.2
1759	21/09/2006	11	12.3	12.4	13	13.7	14.1	14.7	17
2359	21/09/2006	8.5	11.8	12.3	12.7	13.2	13.7	14.3	16.7
559	22/09/2006	6.3	11.2	12.2	12.7	13.2	13.6	14.2	16.6
1159	22/09/2006	10	11.2	12.6	13.3	13.9	14.2	14.7	17.2
1759	22/09/2006	18.8	12.1	11.8	12.3	12.8	13.2	13.7	16.2
2359	22/09/2006	6.7	12.3	12.5	12.7	13.2	13.5	14.1	16.6
559	23/09/2006	2.1	10.9	12.4	12.9	13.3	13.7	14.2	16.8
1159	23/09/2006	14.8	10.4	12.1	13	13.5	13.9	14.4	16.9

## MLSB Coke Deep Cover Soil Temperature (deg C)

Time	Date	Sensor Depth (cm)							
		5	20	30	45	70	90	100	180
1759	23/09/2006	20.2	11.5	11.6	12.2	12.8	13.2	13.7	16.3
2359	23/09/2006	6.9	11.9	12.5	13	13.5	13.9	14.4	17
559	24/09/2006	8.5	10.8	12	12.7	13.2	13.6	14.1	16.7
1159	24/09/2006	17.8	10.7	11.9	12.7	13.3	13.7	14.2	16.8
1759	24/09/2006	20.6	11.4	11.4	11.8	12.4	12.8	13.2	15.9
2359	24/09/2006	10.5	11.7	12.2	12.5	12.9	13.3	13.8	16.5
559	25/09/2006	7.5	11.2	12.1	12.5	13	13.4	13.9	16.5
1159	25/09/2006	10.1	11.2	12.2	12.8	13.3	13.6	14.1	16.7
1759	25/09/2006	11.7	11.9	11.9	12.3	12.8	13.1	13.6	16.3
2359	25/09/2006	6.7	11.6	12	12.3	12.7	13	13.5	16.2
559	26/09/2006	4.1	10.9	12	12.5	12.9	13.2	13.6	16.3
1159	26/09/2006	4.7	10.6	12	12.7	13.2	13.5	13.9	16.6
1759	26/09/2006	5.6	10.9	11.6	12.2	12.7	13.1	13.5	16.2
2359	26/09/2006	-0.5	10.5	11.8	12.3	12.9	13.3	13.7	16.4
559	27/09/2006	-3.5	9.1	11.4	12.4	13	13.3	13.8	16.5
1159	27/09/2006	6.6	8.8	11.3	12.6	13.4	13.7	14.2	16.8
1759	27/09/2006	11	10.1	10.7	11.6	12.3	12.9	13.4	16.1
2359	27/09/2006	7.9	10.5	11.1	11.8	12.6	13	13.5	16.3
559	28/09/2006	9.3	10.5	11.3	11.9	12.4	13	13.6	16.3
1159	28/09/2006	17.6	10.3	11.2	11.9	12.5	12.9	13.5	16.2
1759	28/09/2006	20.4	11.1	11.1	11.6	12.2	12.6	13.2	16
2359	28/09/2006	11.6	10.7	11.3	11.6	12.1	12.5	13.1	16
559	29/09/2006	9	10.1	11.4	12	12.5	12.9	13.4	16.3
1159	29/09/2006	11.7	9.5	11	11.8	12.4	12.8	13.3	16.2
1759	29/09/2006	20.5	10.3	10.8	11.5	12.1	12.5	13	15.9
2359	29/09/2006	9.2	10.5	11	11.5	12.1	12.5	13	16
559	30/09/2006	7.6	9.8	11	11.6	12.1	12.5	13.1	16
1159	30/09/2006	11.1	10.2	11.4	12.1	12.7	13	13.5	16.5
1759	30/09/2006	10.1	10.6	10.4	10.9	11.4	11.8	12.3	15.3
2359	30/09/2006	2.7	10.8	11.3	11.5	11.9	12.4	12.9	16
559	01/10/2006	5.4	9.6	11.3	11.9	12.1	12.7	13.2	16.2
1159	01/10/2006	10.6	9.3	10.8	11.6	12.2	12.5	13	16.1
1759	01/10/2006	9.2	9.9	10.5	11.2	11.6	12.2	12.7	15.7
2359	01/10/2006	3.8	9.8	10.7	11.3	11.9	12.3	12.8	15.9
559	02/10/2006	1.5	9.2	10.6	11.3	11.9	12.3	12.8	15.9
1159	02/10/2006	6.5	9	10.8	11.7	12.4	12.8	13.3	16.4
1759	02/10/2006	10.1	9.2	9.9	10.7	11.4	11.8	12.3	15.5
2359	02/10/2006	0.6	9.1	10.2	10.9	11.6	12	12.6	15.7
559	03/10/2006	-3.6	7.8	10	10.9	11.6	12.1	12.6	15.8
1159	03/10/2006	2.4	7.6	10.1	11.4	12.2	12.6	13.1	16.3
1759	03/10/2006	16.5	8.1	8.8	9.9	10.8	11.3	11.8	15.1
2359	03/10/2006	6.5	8.3	9.5	10.2	11.1	11.6	12.2	15.5
559	04/10/2006	0.1	7.4	9.4	10.4	11.2	11.7	12.3	15.7
1159	04/10/2006	12.8	7	9.3	10.6	11.5	12	12.6	16
1759	04/10/2006	21.4	7.6	8.4	9.4	10.4	10.9	11.5	14.9
2359	04/10/2006	12.7	8.2	9.1	9.9	10.3	11.4	12	15.5
559	05/10/2006	12.7	7.8	9.1	10	10.7	11.3	12	15.5
1159	05/10/2006	16.9	8.2	9.7	10.7	11.5	12	12.7	16.2

**Deep Cover - Matric Suction Data**

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 (Damaged)	20	30	45	70	90	100	180
559	01/05/2005	0	17	39	3	4	128	22	53
1159	01/05/2005	0	18	40	3	6	145	25	55
1759	01/05/2005	0	22	47	4	8	155	30	61
2359	01/05/2005	0	19	42	3	6	136	28	55
559	02/05/2005	0	16	39	2	4	123	25	49
1159	02/05/2005	0	22	46	4	7	172	34	60
1759	02/05/2005	0	25	55	6	10	205	42	74
2359	02/05/2005	0	16	46	5	9	168	39	58
559	03/05/2005	0	14	37	3	6	147	31	53
1159	03/05/2005	0	20	49	5	10	203	46	67
1759	03/05/2005	0	18	54	6	12	231	53	75
2359	03/05/2005	0	15	45	5	11	193	50	66
559	04/05/2005	0	13	39	2	7	153	39	58
1159	04/05/2005	0	18	49	4	12	214	56	65
1759	04/05/2005	0	19	49	5	13	229	59	76
2359	04/05/2005	0	17	43	5	13	205	52	68
559	05/05/2005	0	15	40	3	9	167	49	56
1159	05/05/2005	0	21	50	6	12	244	68	72
1759	05/05/2005	0	19	47	5	13	227	63	69
2359	05/05/2005	0	12	41	4	11	206	58	62
559	06/05/2005	0	12	39	4	11	189	60	60
1159	06/05/2005	0	13	39	4	12	208	64	64
1759	06/05/2005	0	15	44	5	14	242	77	73
2359	06/05/2005	0	14	38	4	12	212	69	63
559	07/05/2005	0	11	32	3	9	175	58	52
1159	07/05/2005	0	15	40	4	12	233	75	64
1759	07/05/2005	0	18	46	6	15	277	96	77
2359	07/05/2005	0	16	41	5	14	237	87	65
559	08/05/2005	0	14	37	3	10	210	76	60
1159	08/05/2005	0	19	46	5	14	273	98	72
1759	08/05/2005	0	20	50	6	16	322	122	82
2359	08/05/2005	0	16	43	4	11	242	94	66
559	09/05/2005	0	17	37	4	9	213	89	59
1159	09/05/2005	0	16	35	3	7	200	86	53
1759	09/05/2005	0	16	42	4	9	243	96	63
2359	09/05/2005	0	16	36	3	6	185	78	54
559	10/05/2005	0	15	34	2	2	175	72	49
1159	10/05/2005	0	17	37	2	0	201	90	55
1759	10/05/2005	0	20	43	4	0	244	102	64
2359	10/05/2005	0	18	38	4	0	206	95	59
559	11/05/2005	0	16	35	2	0	201	88	51
1159	11/05/2005	0	23	48	4	0	263	124	65
1759	11/05/2005	0	25	56	6	10	353	150	80
2359	11/05/2005	0	21	49	5	20	280	138	70
559	12/05/2005	0	18	38	3	15	222	113	58
1159	12/05/2005	0	24	53	4	22	315	158	73
1759	12/05/2005	0	23	50	5	22	284	142	69
2359	12/05/2005	0	19	42	3	16	213	122	56
559	13/05/2005	0	16	39	3	13	203	107	53
1159	13/05/2005	0	21	45	3	17	240	138	64
1759	13/05/2005	0	23	51	5	24	297	165	69
2359	13/05/2005	0	20	46	4	18	257	148	64
559	14/05/2005	0	19	40	2	14	211	117	54
1159	14/05/2005	0	24	53	5	24	306	187	72
1759	14/05/2005	0	27	60	6	25	387	245	83
2359	14/05/2005	0	21	54	5	21	306	200	71
559	15/05/2005	0	22	48	4	18	260	187	64
1159	15/05/2005	0	27	56	5	22	336	244	83
1759	15/05/2005	0	26	59	6	24	321	257	80
2359	15/05/2005	0	24	55	5	22	249	229	76
559	16/05/2005	0	21	51	5	19	187	208	68
1159	16/05/2005	0	28	60	6	23	146	288	79
1759	16/05/2005	0	27	65	7	26	73	362	86
2359	16/05/2005	0	22	53	6	22	42	271	78
559	17/05/2005	0	21	49	4	19	28	215	67
1159	17/05/2005	0	22	48	4	17	20	225	58
1759	17/05/2005	0	26	57	5	24	24	344	79
2359	17/05/2005	0	20	49	4	19	15	327	61
559	18/05/2005	0	26	55	5	22	18	261	71

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	18/05/2005	0	21	51	4	19	13	219	64
1759	18/05/2005	0	6	45	4	18	13	217	67
2359	18/05/2005	0	6	25	5	19	12	217	66
559	19/05/2005	0	5	25	4	19	14	206	64
1159	19/05/2005	0	6	24	4	16	9	210	64
1759	19/05/2005	0	6	28	5	19	10	234	73
2359	19/05/2005	0	6	26	4	18	9	219	71
559	20/05/2005	0	6	24	3	17	7	183	64
1159	20/05/2005	0	6	26	4	17	9	226	68
1759	20/05/2005	0	7	30	6	21	12	299	84
2359	20/05/2005	0	7	27	6	19	11	216	71
559	21/05/2005	0	5	23	3	16	6	170	59
1159	21/05/2005	0	8	30	5	21	12	243	75
1759	21/05/2005	0	10	36	7	27	15	264	86
2359	21/05/2005	0	7	25	4	17	9	189	71
559	22/05/2005	0	6	26	3	16	4	160	61
1159	22/05/2005	0	8	28	4	18	7	185	70
1759	22/05/2005	0	10	35	5	20	11	215	76
2359	22/05/2005	0	8	28	4	16	4	155	67
559	23/05/2005	0	7	27	2	14	4	147	57
1159	23/05/2005	0	9	30	4	17	5	161	62
1759	23/05/2005	0	11	32	4	17	7	167	69
2359	23/05/2005	0	10	30	3	15	4	151	59
559	24/05/2005	0	9	29	2	14	5	147	57
1159	24/05/2005	0	10	31	3	15	4	150	57
1759	24/05/2005	0	10	34	3	16	4	147	61
2359	24/05/2005	0	11	32	3	14	4	139	57
559	25/05/2005	0	11	33	3	15	4	145	58
1159	25/05/2005	0	10	33	3	14	5	137	55
1759	25/05/2005	0	9	33	3	14	4	136	58
2359	25/05/2005	0	9	33	2	15	4	133	58
559	26/05/2005	0	9	33	3	15	4	136	58
1159	26/05/2005	0	10	31	3	14	3	147	59
1759	26/05/2005	0	11	38	5	18	7	165	67
2359	26/05/2005	0	10	35	4	18	6	158	62
559	27/05/2005	0	8	29	2	13	3	125	52
1159	27/05/2005	0	11	35	4	17	8	163	63
1759	27/05/2005	0	11	37	4	20	10	183	71
2359	27/05/2005	0	11	34	4	16	5	144	63
559	28/05/2005	0	9	30	3	15	4	128	54
1159	28/05/2005	0	11	39	4	18	6	151	66
1759	28/05/2005	0	14	47	6	23	12	212	81
2359	28/05/2005	0	12	41	6	20	10	165	69
559	29/05/2005	0	10	35	3	14	6	142	56
1159	29/05/2005	0	13	43	5	21	9	177	72
1759	29/05/2005	0	16	50	6	25	15	218	85
2359	29/05/2005	0	14	42	5	22	10	172	74
559	30/05/2005	0	12	38	4	17	5	136	62
1159	30/05/2005	0	16	51	6	23	13	203	83
1759	30/05/2005	0	19	57	8	24	16	230	92
2359	30/05/2005	0	14	49	6	23	13	183	76
559	31/05/2005	0	13	40	4	17	8	146	66
1159	31/05/2005	0	19	51	6	23	10	183	81
1759	31/05/2005	0	20	59	8	28	16	239	95
2359	31/05/2005	0	16	48	7	23	11	174	76
559	01/06/2005	0	14	41	5	16	7	137	62
1159	01/06/2005	0	17	48	6	19	10	159	70
1759	01/06/2005	0	19	55	9	23	13	192	84
2359	01/06/2005	0	16	46	7	20	10	145	69
559	02/06/2005	0	16	43	6	17	7	129	58
1159	02/06/2005	0	20	48	7	20	8	147	70
1759	02/06/2005	0	21	54	8	24	14	174	80
2359	02/06/2005	0	18	48	8	22	11	155	68
559	03/06/2005	0	18	46	7	19	5	126	65
1159	03/06/2005	0	23	54	8	22	11	154	73
1759	03/06/2005	0	23	59	9	27	14	183	88
2359	03/06/2005	0	20	50	8	24	13	147	73
559	04/06/2005	0	18	44	7	19	9	132	58
1159	04/06/2005	0	21	48	6	20	10	120	61
1759	04/06/2005	0	23	57	7	26	13	150	75

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	04/06/2005	0	21	48	7	22	10	140	65
559	05/06/2005	0	21	45	5	20	9	113	59
1159	05/06/2005	0	26	54	8	26	11	151	76
1759	05/06/2005	0	28	61	10	30	19	167	88
2359	05/06/2005	0	21	51	7	22	12	131	69
559	06/06/2005	0	20	44	6	20	9	109	54
1159	06/06/2005	0	30	62	9	29	16	150	74
1759	06/06/2005	0	25	56	8	29	14	151	78
2359	06/06/2005	0	22	52	9	24	14	124	68
559	07/06/2005	0	21	44	6	21	9	107	55
1159	07/06/2005	0	32	61	8	28	14	141	76
1759	07/06/2005	0	28	67	10	31	19	155	80
2359	07/06/2005	0	24	53	8	27	14	126	70
559	08/06/2005	0	22	46	5	22	10	104	57
1159	08/06/2005	0	29	59	8	30	14	151	79
1759	08/06/2005	0	29	66	10	32	21	156	86
2359	08/06/2005	0	25	54	9	27	17	131	70
559	09/06/2005	0	24	49	7	22	12	104	62
1159	09/06/2005	0	31	57	8	28	17	136	74
1759	09/06/2005	0	24	56	8	28	17	134	70
2359	09/06/2005	0	25	52	7	27	15	105	65
559	10/06/2005	0	24	47	6	21	10	95	56
1159	10/06/2005	0	28	52	7	25	10	112	61
1759	10/06/2005	0	27	57	7	27	16	119	65
2359	10/06/2005	0	23	49	6	23	11	93	52
559	11/06/2005	0	23	45	5	20	10	86	49
1159	11/06/2005	0	29	53	7	23	11	96	55
1759	11/06/2005	0	27	52	6	24	13	95	56
2359	11/06/2005	0	28	52	6	21	11	93	52
559	12/06/2005	0	28	53	7	21	11	88	52
1159	12/06/2005	0	30	54	7	21	12	85	47
1759	12/06/2005	0	32	54	7	24	12	91	52
2359	12/06/2005	0	30	56	7	24	13	92	53
559	13/06/2005	0	31	57	8	22	12	98	51
1159	13/06/2005	0	30	58	7	23	13	91	52
1759	13/06/2005	0	31	65	9	26	15	98	62
2359	13/06/2005	0	25	60	9	25	15	96	55
559	14/06/2005	0	21	60	8	24	16	93	54
1159	14/06/2005	0	14	56	8	24	14	94	57
1759	14/06/2005	0	12	58	10	30	19	110	61
2359	14/06/2005	0	8	47	8	25	15	92	53
559	15/06/2005	0	8	43	7	25	11	87	50
1159	15/06/2005	0	6	42	6	23	13	93	51
1759	15/06/2005	0	5	40	6	26	14	96	51
2359	15/06/2005	0	5	29	6	24	15	90	51
559	16/06/2005	0	5	25	5	23	13	89	51
1159	16/06/2005	0	5	26	4	24	14	92	51
1759	16/06/2005	0	6	29	5	26	17	103	56
2359	16/06/2005	0	6	26	4	23	14	92	49
559	17/06/2005	0	3	22	2	20	9	77	45
1159	17/06/2005	0	6	28	4	24	14	101	55
1759	17/06/2005	0	8	28	3	22	13	95	59
2359	17/06/2005	0	5	26	4	21	12	88	51
559	18/06/2005	0	5	22	2	17	8	76	43
1159	18/06/2005	0	6	28	3	21	12	95	49
1759	18/06/2005	0	7	32	5	26	14	111	57
2359	18/06/2005	0	8	30	4	24	13	99	55
559	19/06/2005	0	5	23	2	17	7	79	41
1159	19/06/2005	0	12	36	5	26	18	126	62
1759	19/06/2005	0	9	32	4	23	12	98	51
2359	19/06/2005	0	9	28	4	21	10	84	45
559	20/06/2005	0	8	24	2	16	7	77	41
1159	20/06/2005	0	14	32	3	22	14	105	54
1759	20/06/2005	0	13	37	5	27	15	111	62
2359	20/06/2005	0	11	33	4	23	13	94	53
559	21/06/2005	0	12	31	3	21	10	91	44
1159	21/06/2005	0	15	34	4	23	12	98	54
1759	21/06/2005	0	17	42	6	28	18	129	62
2359	21/06/2005	0	13	34	4	22	14	93	51
559	22/06/2005	0	15	34	4	19	12	89	48

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	22/06/2005	0	16	33	4	20	9	87	47
1759	22/06/2005	0	5	35	4	22	10	89	45
2359	22/06/2005	0	4	20	3	18	9	81	46
559	23/06/2005	0	4	20	2	17	10	82	43
1159	23/06/2005	0	3	19	2	13	3	76	43
1759	23/06/2005	0	4	19	2	12	3	77	42
2359	23/06/2005	0	4	19	2	10	3	76	41
559	24/06/2005	0	3	16	1	9	1	74	37
1159	24/06/2005	0	5	21	2	12	4	85	48
1759	24/06/2005	0	5	24	3	15	7	99	55
2359	24/06/2005	0	5	21	3	12	5	91	47
559	25/06/2005	0	4	20	2	12	3	78	44
1159	25/06/2005	0	4	22	2	14	3	80	45
1759	25/06/2005	0	4	19	2	11	4	83	44
2359	25/06/2005	0	5	21	3	13	4	82	45
559	26/06/2005	0	4	19	1	11	2	70	40
1159	26/06/2005	0	5	23	2	13	4	84	48
1759	26/06/2005	0	5	24	2	14	4	94	49
2359	26/06/2005	0	5	21	2	13	4	83	44
559	27/06/2005	0	4	19	1	10	2	72	40
1159	27/06/2005	0	6	22	2	13	4	88	46
1759	27/06/2005	0	6	25	3	16	6	102	54
2359	27/06/2005	0	6	24	2	13	6	84	49
559	28/06/2005	0	4	20	1	10	1	70	39
1159	28/06/2005	0	7	24	2	13	4	87	48
1759	28/06/2005	0	6	23	2	12	5	78	41
2359	28/06/2005	0	6	23	3	12	4	83	42
559	29/06/2005	0	6	24	2	13	4	75	42
1159	29/06/2005	0	6	24	2	13	4	82	41
1759	29/06/2005	0	9	30	4	17	8	96	54
2359	29/06/2005	0	6	25	3	14	3	82	45
559	30/06/2005	0	6	24	2	14	5	77	43
1159	30/06/2005	0	8	26	3	15	7	89	50
1759	30/06/2005	0	9	31	4	18	9	109	59
2359	30/06/2005	0	7	27	3	16	7	89	47
559	01/07/2005	0	6	23	2	12	3	69	34
1159	01/07/2005	0	10	28	3	17	6	83	45
1759	01/07/2005	0	11	34	4	18	8	106	54
2359	01/07/2005	0	9	27	2	14	6	78	41
559	02/07/2005	0	9	24	1	10	2	66	35
1159	02/07/2005	0	15	31	3	17	9	90	50
1759	02/07/2005	0	13	34	4	16	7	81	45
2359	02/07/2005	0	4	22	2	13	4	73	40
559	03/07/2005	0	4	19	2	12	4	70	40
1159	03/07/2005	0	5	20	2	12	3	70	42
1759	03/07/2005	0	6	27	3	16	7	92	53
2359	03/07/2005	0	5	23	3	12	5	77	42
559	04/07/2005	0	4	19	2	12	3	70	40
1159	04/07/2005	0	5	24	3	15	6	83	47
1759	04/07/2005	0	7	26	3	15	5	88	45
2359	04/07/2005	0	5	23	2	13	6	77	41
559	05/07/2005	0	4	20	2	12	3	71	35
1159	05/07/2005	0	8	25	3	15	7	83	46
1759	05/07/2005	0	9	30	4	17	10	101	49
2359	05/07/2005	0	7	22	3	14	6	83	42
559	06/07/2005	0	5	21	2	12	3	67	35
1159	06/07/2005	0	7	25	2	14	5	81	41
1759	06/07/2005	0	6	25	3	16	8	83	41
2359	06/07/2005	0	5	23	2	13	3	71	35
559	07/07/2005	0	4	19	1	11	3	63	31
1159	07/07/2005	0	5	23	2	11	3	68	37
1759	07/07/2005	0	6	25	3	17	8	80	43
2359	07/07/2005	0	6	23	3	13	5	73	36
559	08/07/2005	0	5	22	2	11	3	63	32
1159	08/07/2005	0	7	25	3	12	5	78	38
1759	08/07/2005	0	8	29	3	15	7	86	42
2359	08/07/2005	0	7	25	2	15	7	76	36
559	09/07/2005	0	7	24	2	12	3	67	30
1159	09/07/2005	0	8	23	2	10	3	66	32
1759	09/07/2005	0	12	32	4	16	7	82	40

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	09/07/2005	0	11	27	3	13	5	68	33
559	10/07/2005	0	11	25	2	11	3	63	31
1159	10/07/2005	0	14	28	1	14	5	74	39
1759	10/07/2005	0	15	32	3	15	8	83	40
2359	10/07/2005	0	13	29	2	12	5	68	35
559	11/07/2005	0	14	27	1	10	2	56	27
1159	11/07/2005	0	22	36	2	15	6	77	39
1759	11/07/2005	0	20	42	5	18	10	92	44
2359	11/07/2005	0	19	34	3	14	4	68	35
559	12/07/2005	0	17	30	1	11	2	59	27
1159	12/07/2005	0	25	39	3	17	7	75	42
1759	12/07/2005	0	25	47	4	16	10	87	44
2359	12/07/2005	0	22	39	3	17	5	69	39
559	13/07/2005	0	21	35	2	11	4	63	32
1159	13/07/2005	0	28	44	4	15	8	76	40
1759	13/07/2005	0	26	46	3	17	7	73	39
2359	13/07/2005	0	24	42	3	14	6	64	32
559	14/07/2005	0	25	42	2	12	4	61	30
1159	14/07/2005	0	33	51	3	16	7	74	38
1759	14/07/2005	0	34	52	4	16	6	78	40
2359	14/07/2005	0	28	50	3	15	7	66	37
559	15/07/2005	0	28	46	2	13	4	61	33
1159	15/07/2005	0	38	57	4	17	8	75	38
1759	15/07/2005	0	34	57	5	19	10	82	40
2359	15/07/2005	0	31	50	4	15	6	69	35
559	16/07/2005	0	32	51	4	13	5	61	33
1159	16/07/2005	0	37	57	5	15	7	71	34
1759	16/07/2005	0	38	59	5	16	7	70	36
2359	16/07/2005	0	37	56	5	14	8	67	34
559	17/07/2005	0	35	54	5	13	3	56	32
1159	17/07/2005	0	45	64	6	16	10	71	39
1759	17/07/2005	0	45	68	7	16	9	74	40
2359	17/07/2005	0	39	63	7	15	8	65	33
559	18/07/2005	0	39	60	6	15	5	62	33
1159	18/07/2005	0	46	70	8	19	11	75	39
1759	18/07/2005	0	38	62	7	14	7	62	34
2359	18/07/2005	0	27	56	5	14	6	59	31
559	19/07/2005	0	7	43	2	14	5	57	33
1159	19/07/2005	0	6	27	1	13	4	61	33
1759	19/07/2005	0	6	24	2	14	6	70	37
2359	19/07/2005	0	5	24	2	12	4	59	30
559	20/07/2005	0	5	21	1	12	3	58	30
1159	20/07/2005	0	6	27	2	13	5	64	37
1759	20/07/2005	0	6	28	3	14	6	72	38
2359	20/07/2005	0	5	25	3	12	5	63	32
559	21/07/2005	0	5	23	2	11	2	57	30
1159	21/07/2005	0	7	26	2	12	4	63	31
1759	21/07/2005	0	9	30	3	14	5	69	39
2359	21/07/2005	0	10	28	3	13	4	65	31
559	22/07/2005	0	10	25	2	12	3	59	31
1159	22/07/2005	0	15	36	3	14	6	68	38
1759	22/07/2005	0	17	37	3	17	7	72	40
2359	22/07/2005	0	15	31	2	13	4	61	33
559	23/07/2005	0	16	32	2	12	4	58	31
1159	23/07/2005	0	15	31	2	11	3	55	27
1759	23/07/2005	0	4	31	2	12	4	55	29
2359	23/07/2005	0	4	18	2	11	2	55	29
559	24/07/2005	0	4	17	1	10	2	57	29
1159	24/07/2005	0	4	18	1	10	2	56	29
1759	24/07/2005	0	4	19	2	10	4	57	28
2359	24/07/2005	0	4	17	2	9	2	59	30
559	25/07/2005	0	3	16	1	8	1	50	27
1159	25/07/2005	0	4	18	2	10	4	59	31
1759	25/07/2005	0	4	18	2	10	3	60	31
2359	25/07/2005	0	4	17	2	9	3	58	29
559	26/07/2005	0	3	17	1	7	1	52	26
1159	26/07/2005	0	4	17	1	8	1	55	27
1759	26/07/2005	0	5	20	2	12	5	65	30
2359	26/07/2005	0	4	18	1	9	2	58	27
559	27/07/2005	0	3	14	1	7	0	48	22



MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	27/07/2005	0	5	17	2	9	2	58	26
1759	27/07/2005	0	6	22	3	12	4	71	34
2359	27/07/2005	0	4	20	2	10	3	65	29
559	28/07/2005	0	3	18	1	8	0	55	25
1159	28/07/2005	0	5	18	2	10	3	58	29
1759	28/07/2005	0	4	20	1	11	3	61	26
2359	28/07/2005	0	4	20	2	11	3	62	29
559	29/07/2005	0	4	17	1	9	2	57	25
1159	29/07/2005	0	5	21	2	12	4	66	31
1759	29/07/2005	0	5	25	4	14	5	74	34
2359	29/07/2005	0	4	19	2	11	5	64	27
559	30/07/2005	0	4	18	2	10	2	57	26
1159	30/07/2005	0	6	21	2	11	4	66	31
1759	30/07/2005	0	6	25	4	13	7	76	36
2359	30/07/2005	0	5	20	3	12	4	68	29
559	31/07/2005	0	5	18	2	10	4	61	26
1159	31/07/2005	0	4	21	2	9	1	57	30
1759	31/07/2005	0	6	25	3	14	8	79	34
2359	31/07/2005	0	5	22	3	11	6	64	29
559	01/08/2005	0	5	19	2	9	3	60	26
1159	01/08/2005	0	6	23	3	12	5	74	32
1759	01/08/2005	0	9	28	5	16	11	93	39
2359	01/08/2005	0	5	21	3	12	4	66	30
559	02/08/2005	0	5	19	2	10	3	62	27
1159	02/08/2005	0	6	22	2	12	4	65	31
1759	02/08/2005	0	5	21	2	11	4	60	29
2359	02/08/2005	0	5	19	2	10	3	57	29
559	03/08/2005	0	5	20	2	11	3	57	28
1159	03/08/2005	0	5	21	2	11	3	63	31
1759	03/08/2005	0	7	26	3	13	6	67	31
2359	03/08/2005	0	5	21	2	11	3	59	28
559	04/08/2005	0	4	19	2	9	2	54	25
1159	04/08/2005	0	8	28	3	13	7	74	35
1759	04/08/2005	0	7	26	3	13	6	72	33
2359	04/08/2005	0	5	21	3	13	4	64	32
559	05/08/2005	0	3	16	1	10	3	57	27
1159	05/08/2005	0	6	21	2	12	5	69	30
1759	05/08/2005	0	6	22	3	13	5	71	34
2359	05/08/2005	0	6	19	2	11	5	61	30
559	06/08/2005	0	4	17	2	10	2	55	26
1159	06/08/2005	0	6	20	2	11	5	71	35
1759	06/08/2005	0	5	22	3	13	5	72	32
2359	06/08/2005	0	6	20	2	11	4	63	31
559	07/08/2005	0	4	18	2	10	4	58	30
1159	07/08/2005	0	5	19	2	10	3	57	28
1759	07/08/2005	0	6	21	2	11	5	64	30
2359	07/08/2005	0	5	18	2	10	2	58	27
559	08/08/2005	0	3	16	1	9	1	50	25
1159	08/08/2005	0	6	20	2	11	3	58	28
1759	08/08/2005	0	4	21	2	9	5	59	30
2359	08/08/2005	0	4	20	1	9	2	55	24
559	09/08/2005	0	4	18	1	9	2	52	25
1159	09/08/2005	0	5	19	1	10	2	56	29
1759	09/08/2005	0	6	21	2	11	3	56	26
2359	09/08/2005	0	5	19	2	10	3	55	27
559	10/08/2005	0	5	19	1	9	2	54	26
1159	10/08/2005	0	8	24	2	12	7	65	31
1759	10/08/2005	0	7	23	2	12	5	61	30
2359	10/08/2005	0	6	21	2	10	3	56	28
559	11/08/2005	0	7	22	1	10	3	53	26
1159	11/08/2005	0	6	22	2	10	2	57	25
1759	11/08/2005	0	7	23	2	11	5	61	29
2359	11/08/2005	0	6	21	2	10	2	54	27
559	12/08/2005	0	6	20	1	9	1	50	25
1159	12/08/2005	0	9	26	3	12	5	60	30
1759	12/08/2005	0	7	25	2	9	3	63	28
2359	12/08/2005	0	6	23	2	10	3	56	28
559	13/08/2005	0	7	22	2	10	3	54	24
1159	13/08/2005	0	7	25	2	11	4	66	30
1759	13/08/2005	0	7	25	2	12	6	59	29

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	13/08/2005	0	6	23	2	10	4	55	29
559	14/08/2005	0	6	21	2	10	3	56	27
1159	14/08/2005	0	6	21	2	10	3	56	26
1759	14/08/2005	0	7	24	2	10	5	63	29
2359	14/08/2005	0	5	21	2	10	3	51	27
559	15/08/2005	0	6	19	1	9	2	49	24
1159	15/08/2005	0	7	24	2	11	4	62	28
1759	15/08/2005	0	7	24	2	12	4	60	28
2359	15/08/2005	0	6	23	2	11	4	55	27
559	16/08/2005	0	6	22	2	9	2	54	25
1159	16/08/2005	0	6	22	2	10	4	55	25
1759	16/08/2005	0	7	22	2	11	5	55	26
2359	16/08/2005	0	6	22	2	12	5	57	28
559	17/08/2005	0	6	22	2	10	4	53	26
1159	17/08/2005	0	6	22	1	10	3	55	24
1759	17/08/2005	0	6	23	2	12	5	58	29
2359	17/08/2005	0	4	21	2	11	3	56	28
559	18/08/2005	0	4	18	2	11	4	57	26
1159	18/08/2005	0	4	19	2	11	3	58	27
1759	18/08/2005	0	4	18	2	11	5	60	30
2359	18/08/2005	0	4	18	2	10	5	58	27
559	19/08/2005	0	4	18	2	11	3	55	27
1159	19/08/2005	0	4	18	2	10	5	60	30
1759	19/08/2005	0	4	19	3	11	4	58	28
2359	19/08/2005	0	4	18	2	10	4	58	28
559	20/08/2005	0	4	18	1	10	3	54	28
1159	20/08/2005	0	5	19	2	9	5	62	30
1759	20/08/2005	0	5	21	3	13	6	71	31
2359	20/08/2005	0	5	20	3	13	5	62	28
559	21/08/2005	0	5	19	2	10	5	58	29
1159	21/08/2005	0	6	21	2	11	3	62	29
1759	21/08/2005	0	8	26	4	16	10	79	36
2359	21/08/2005	0	4	19	3	11	5	64	29
559	22/08/2005	0	4	19	2	11	5	64	30
1159	22/08/2005	0	5	19	2	11	4	64	30
1759	22/08/2005	0	5	22	3	12	6	71	37
2359	22/08/2005	0	4	19	2	10	3	61	31
559	23/08/2005	0	4	16	2	9	2	56	28
1159	23/08/2005	0	6	20	3	11	4	67	31
1759	23/08/2005	0	5	20	2	12	4	66	33
2359	23/08/2005	0	3	18	2	10	3	58	27
559	24/08/2005	0	4	18	2	10	3	61	27
1159	24/08/2005	0	5	18	2	10	4	60	30
1759	24/08/2005	0	6	22	3	12	5	67	33
2359	24/08/2005	0	4	18	2	10	3	62	28
559	25/08/2005	0	4	16	1	8	2	54	25
1159	25/08/2005	0	5	19	2	10	2	58	29
1759	25/08/2005	0	6	24	2	12	7	75	34
2359	25/08/2005	0	5	21	2	12	3	61	31
559	26/08/2005	0	4	17	1	8	2	55	28
1159	26/08/2005	0	5	19	1	9	3	61	29
1759	26/08/2005	0	7	27	4	14	9	81	38
2359	26/08/2005	0	5	22	2	13	6	61	32
559	27/08/2005	0	6	19	2	10	3	60	27
1159	27/08/2005	0	7	23	2	11	6	73	32
1759	27/08/2005	0	9	27	4	14	9	79	40
2359	27/08/2005	0	6	22	2	11	5	62	31
559	28/08/2005	0	7	20	1	11	2	61	28
1159	28/08/2005	0	9	23	2	11	6	70	31
1759	28/08/2005	0	12	30	4	14	10	86	40
2359	28/08/2005	0	11	27	2	13	7	67	35
559	29/08/2005	0	11	23	2	11	4	61	29
1159	29/08/2005	0	13	24	2	11	5	64	28
1759	29/08/2005	0	11	23	2	9	2	54	25
2359	29/08/2005	0	13	23	2	9	3	52	26
559	30/08/2005	0	11	25	1	9	2	53	26
1159	30/08/2005	0	6	24	1	8	2	53	25
1759	30/08/2005	0	5	25	2	10	3	57	30
2359	30/08/2005	0	5	21	1	8	1	53	25
559	31/08/2005	0	5	20	2	10	2	52	25

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	31/08/2005	0	6	20	2	9	3	55	30
1759	31/08/2005	0	7	25	3	13	5	62	31
2359	31/08/2005	0	5	19	2	9	2	50	26
559	01/09/2005	0	4	18	1	9	2	51	26
1159	01/09/2005	0	4	20	2	10	4	56	29
1759	01/09/2005	0	5	24	3	12	4	62	33
2359	01/09/2005	0	5	18	2	9	2	53	26
559	02/09/2005	0	3	19	1	8	1	51	26
1159	02/09/2005	0	4	17	1	9	1	53	27
1759	02/09/2005	0	5	21	2	11	5	65	30
2359	02/09/2005	0	4	19	1	10	3	53	27
559	03/09/2005	0	5	18	1	9	2	53	26
1159	03/09/2005	0	5	20	2	11	2	53	30
1759	03/09/2005	0	6	24	3	13	5	67	33
2359	03/09/2005	0	5	20	2	10	4	55	28
559	04/09/2005	0	4	17	1	10	1	53	24
1159	04/09/2005	0	6	20	2	11	3	61	29
1759	04/09/2005	0	6	22	2	11	4	59	29
2359	04/09/2005	0	4	21	2	10	2	55	27
559	05/09/2005	0	4	18	1	8	2	54	25
1159	05/09/2005	0	5	21	2	10	4	56	29
1759	05/09/2005	0	6	23	2	12	5	65	31
2359	05/09/2005	0	5	20	2	11	3	58	31
559	06/09/2005	0	4	19	1	8	1	50	25
1159	06/09/2005	0	7	23	2	11	4	57	30
1759	06/09/2005	0	9	30	4	15	9	76	37
2359	06/09/2005	0	7	21	2	10	3	55	28
559	07/09/2005	0	7	20	1	10	2	54	25
1159	07/09/2005	0	9	23	2	10	3	60	30
1759	07/09/2005	0	10	28	3	14	5	68	33
2359	07/09/2005	0	9	25	2	11	4	59	28
559	08/09/2005	0	10	25	2	11	5	58	29
1159	08/09/2005	0	13	28	2	12	4	56	30
1759	08/09/2005	0	15	32	4	14	11	72	36
2359	08/09/2005	0	12	25	2	11	3	57	28
559	09/09/2005	0	12	24	2	9	2	52	26
1159	09/09/2005	0	16	30	2	10	3	59	27
1759	09/09/2005	0	15	30	2	11	4	59	30
2359	09/09/2005	0	14	27	2	11	3	59	30
559	10/09/2005	0	16	28	2	10	3	55	29
1159	10/09/2005	0	15	29	2	11	3	55	27
1759	10/09/2005	0	19	32	3	13	6	63	29
2359	10/09/2005	0	16	29	2	11	3	58	29
559	11/09/2005	0	16	30	2	10	2	51	27
1159	11/09/2005	0	18	30	1	8	1	50	26
1759	11/09/2005	0	20	33	3	12	6	65	30
2359	11/09/2005	0	17	31	2	9	3	53	26
559	12/09/2005	0	20	32	2	10	3	53	27
1159	12/09/2005	0	21	34	2	10	4	58	27
1759	12/09/2005	0	19	34	3	11	4	52	28
2359	12/09/2005	0	19	32	2	10	3	55	27
559	13/09/2005	0	20	33	2	9	4	47	26
1159	13/09/2005	0	23	38	2	11	4	52	28
1759	13/09/2005	0	23	39	3	13	5	58	30
2359	13/09/2005	0	20	35	3	11	5	52	26
559	14/09/2005	0	21	35	2	10	2	50	25
1159	14/09/2005	0	21	35	2	9	3	51	23
1759	14/09/2005	0	23	41	3	12	4	57	28
2359	14/09/2005	0	23	38	3	11	4	52	27
559	15/09/2005	0	22	36	2	10	3	50	24
1159	15/09/2005	0	28	40	2	11	5	53	26
1759	15/09/2005	0	25	45	4	14	7	61	30
2359	15/09/2005	0	23	41	3	11	4	52	26
559	16/09/2005	0	25	39	3	11	4	53	26
1159	16/09/2005	0	27	44	4	13	6	57	29
1759	16/09/2005	0	28	49	4	14	7	59	31
2359	16/09/2005	0	29	47	4	13	6	62	29
559	17/09/2005	0	26	45	4	12	4	54	25
1159	17/09/2005	0	28	44	4	13	8	58	29
1759	17/09/2005	0	33	57	6	17	9	69	37

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	17/09/2005	0	27	48	5	14	6	59	28
559	18/09/2005	0	30	47	5	13	8	58	30
1159	18/09/2005	0	34	52	5	13	8	60	26
1759	18/09/2005	0	34	61	7	19	13	74	36
2359	18/09/2005	0	30	50	6	15	10	60	30
559	19/09/2005	0	29	49	5	15	9	58	28
1159	19/09/2005	0	32	50	5	14	6	62	30
1759	19/09/2005	0	32	53	6	16	10	63	29
2359	19/09/2005	0	30	50	6	15	7	57	28
559	20/09/2005	0	34	51	6	15	10	61	28
1159	20/09/2005	0	32	54	6	15	10	64	30
1759	20/09/2005	0	32	55	6	17	9	62	30
2359	20/09/2005	0	31	53	6	15	9	60	28
559	21/09/2005	0	31	49	6	14	7	55	29
1159	21/09/2005	0	33	51	6	14	8	56	26
1759	21/09/2005	0	35	59	7	19	12	65	33
2359	21/09/2005	0	32	52	7	16	11	60	30
559	22/09/2005	0	32	48	6	14	8	54	26
1159	22/09/2005	0	31	50	6	16	8	55	26
1759	22/09/2005	0	33	61	8	19	13	65	33
2359	22/09/2005	0	29	53	7	17	8	57	27
559	23/09/2005	0	31	49	6	17	8	52	27
1159	23/09/2005	0	34	52	7	17	10	60	26
1759	23/09/2005	0	33	60	8	20	10	64	31
2359	23/09/2005	0	32	54	8	18	10	58	27
559	24/09/2005	0	35	54	7	20	11	58	28
1159	24/09/2005	0	37	58	9	20	11	61	30
1759	24/09/2005	0	36	56	9	22	14	64	31
2359	24/09/2005	0	35	57	9	20	11	61	28
559	25/09/2005	0	36	57	8	21	13	59	29
1159	25/09/2005	0	36	55	8	19	12	62	28
1759	25/09/2005	0	40	63	11	24	17	73	34
2359	25/09/2005	0	35	56	9	20	12	61	28
559	26/09/2005	0	32	53	8	20	10	57	27
1159	26/09/2005	0	38	60	9	20	13	60	30
1759	26/09/2005	0	39	64	10	22	13	67	29
2359	26/09/2005	0	37	57	10	20	12	64	28
559	27/09/2005	0	32	54	8	19	10	54	25
1159	27/09/2005	0	38	56	10	21	9	57	28
1759	27/09/2005	0	40	64	11	24	15	68	34
2359	27/09/2005	0	37	58	9	21	12	60	29
559	28/09/2005	0	34	52	9	19	9	53	24
1159	28/09/2005	0	38	58	9	19	10	57	28
1759	28/09/2005	0	45	68	11	24	14	69	32
2359	28/09/2005	0	44	67	12	25	15	66	31
559	29/09/2005	0	43	66	11	24	14	65	30
1159	29/09/2005	0	46	67	12	26	14	65	33
1759	29/09/2005	0	47	74	13	28	18	78	35
2359	29/09/2005	0	39	63	10	23	14	59	29
559	30/09/2005	0	43	64	11	22	13	66	31
1159	30/09/2005	0	40	62	10	22	12	61	27
1759	30/09/2005	0	45	70	13	26	16	69	31
2359	30/09/2005	0	39	61	10	21	14	57	27
559	01/10/2005	0	38	56	10	22	11	55	25
1159	01/10/2005	0	43	62	11	22	13	60	26
1759	01/10/2005	0	45	67	12	24	15	65	29
2359	01/10/2005	0	44	63	12	23	13	58	27
559	02/10/2005	0	40	66	11	23	12	56	26
1159	02/10/2005	0	42	63	11	22	12	54	26
1759	02/10/2005	0	46	67	13	25	14	63	28
2359	02/10/2005	0	41	62	13	24	14	61	27
559	03/10/2005	0	40	60	11	22	11	50	24
1159	03/10/2005	0	43	64	11	22	12	53	24
1759	03/10/2005	0	53	79	14	28	16	71	32
2359	03/10/2005	0	44	65	12	24	12	57	25
559	04/10/2005	0	42	64	12	24	14	54	25
1159	04/10/2005	0	46	66	12	25	13	58	26
1759	04/10/2005	0	54	84	14	31	19	72	32
2359	04/10/2005	0	45	73	14	28	17	63	29
559	05/10/2005	0	44	67	13	27	15	57	28

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	05/10/2005	0	45	69	14	28	17	68	29
1759	05/10/2005	0	52	83	16	31	20	76	36
2359	05/10/2005	0	45	69	14	27	16	65	30
559	06/10/2005	0	44	66	14	26	17	61	28
1159	06/10/2005	0	47	73	14	27	17	63	30
1759	06/10/2005	0	55	86	18	34	23	80	36
2359	06/10/2005	0	47	73	15	30	18	68	31
559	07/10/2005	0	49	73	15	29	18	72	30
1159	07/10/2005	0	46	71	14	27	16	64	27
1759	07/10/2005	0	49	79	17	35	20	75	34
2359	07/10/2005	0	48	74	15	30	20	75	31
559	08/10/2005	0	47	72	15	30	21	66	30
1159	08/10/2005	0	46	76	16	31	20	73	31
1759	08/10/2005	0	51	79	16	33	22	82	34
2359	08/10/2005	0	45	69	15	29	17	65	29
559	09/10/2005	0	48	71	14	29	18	66	27
1159	09/10/2005	0	45	71	15	30	17	68	30
1759	09/10/2005	0	60	90	19	38	28	89	40
2359	09/10/2005	0	49	75	17	33	20	78	30
559	10/10/2005	0	51	74	16	33	21	70	30
1159	10/10/2005	0	54	80	17	34	20	73	33
1759	10/10/2005	0	57	85	18	35	23	72	33
2359	10/10/2005	0	53	82	18	35	21	80	34
559	11/10/2005	0	49	73	16	32	20	72	30
1159	11/10/2005	0	52	73	16	33	20	76	29
1759	11/10/2005	0	58	88	20	36	25	85	36
2359	11/10/2005	0	46	75	16	31	21	73	29
559	12/10/2005	0	49	73	16	30	19	70	30
1159	12/10/2005	0	49	78	17	33	19	71	31
1759	12/10/2005	0	61	90	20	38	27	90	37
2359	12/10/2005	0	50	76	16	33	25	79	32
559	13/10/2005	0	54	77	17	34	22	74	31
1159	13/10/2005	0	50	74	15	31	17	67	28
1759	13/10/2005	0	61	91	21	40	26	86	38
2359	13/10/2005	0	49	79	16	33	22	71	32
559	14/10/2005	0	47	73	16	30	19	66	30
1159	14/10/2005	0	52	74	16	34	19	72	32
1759	14/10/2005	0	63	97	22	42	31	92	40
2359	14/10/2005	0	49	75	17	33	21	70	32
559	15/10/2005	0	54	76	17	33	21	71	31
1159	15/10/2005	0	56	74	17	34	21	78	32
1759	15/10/2005	0	59	87	19	37	26	76	33
2359	15/10/2005	0	55	82	19	35	22	78	34
559	16/10/2005	0	50	75	16	34	20	70	29
1159	16/10/2005	0	55	77	16	32	20	70	30
1759	16/10/2005	0	57	86	18	37	24	76	34
2359	16/10/2005	0	48	68	16	31	18	66	28
559	17/10/2005	0	54	75	17	31	21	62	28
1159	17/10/2005	0	52	74	16	31	19	64	29
1759	17/10/2005	0	53	79	17	35	23	71	31
2359	17/10/2005	0	51	72	17	33	18	62	27
559	18/10/2005	0	51	76	16	32	18	63	28
1159	18/10/2005	0	53	74	16	31	20	63	28
1759	18/10/2005	0	62	92	21	38	25	74	33
2359	18/10/2005	0	57	84	18	35	23	72	31
559	19/10/2005	0	55	80	17	33	21	68	29
1159	19/10/2005	0	53	79	17	33	19	63	27
1759	19/10/2005	0	57	84	19	41	25	78	31
2359	19/10/2005	0	56	83	19	37	23	74	32
559	20/10/2005	0	52	79	18	35	22	71	28
1159	20/10/2005	0	57	82	18	37	23	71	30
1759	20/10/2005	0	59	85	20	40	24	80	33
2359	20/10/2005	0	52	75	17	33	22	64	28
559	21/10/2005	0	54	77	16	33	20	66	28
1159	21/10/2005	0	54	77	16	34	21	66	28
1759	21/10/2005	0	65	97	22	43	29	84	37
2359	21/10/2005	0	56	78	18	36	22	66	29
559	22/10/2005	0	56	77	18	34	23	64	27
1159	22/10/2005	0	59	79	17	34	21	62	27
1759	22/10/2005	0	71	98	21	43	29	87	33

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 (Damaged)	20	30	45	70	90	100	180
2359	22/10/2005	0	63	86	19	39	23	74	31
559	23/10/2005	0	58	82	20	35	23	72	30
1159	23/10/2005	0	59	84	19	37	24	73	28
1759	23/10/2005	0	68	102	23	46	33	83	36
2359	23/10/2005	0	58	90	20	41	27	74	30
559	24/10/2005	0	58	87	20	40	25	76	32
1159	24/10/2005	0	57	87	20	40	30	74	31
1759	24/10/2005	0	71	99	24	49	35	89	37
2359	24/10/2005	0	59	87	20	40	29	76	32
559	25/10/2005	0	59	83	20	41	27	75	32
1159	25/10/2005	0	60	85	19	38	25	75	30
1759	25/10/2005	0	79	113	26	52	41	104	41
2359	25/10/2005	0	63	98	23	48	35	87	36
559	26/10/2005	0	58	88	20	42	28	84	34
1159	26/10/2005	0	59	87	22	42	29	86	33
1759	26/10/2005	0	67	100	23	47	32	92	38
2359	26/10/2005	0	58	89	21	43	29	83	32
559	27/10/2005	0	56	85	20	43	28	79	33
1159	27/10/2005	0	57	82	20	38	25	78	29
1759	27/10/2005	0	70	102	24	50	36	89	37
2359	27/10/2005	0	56	80	19	41	26	77	30
559	28/10/2005	0	56	79	19	38	26	74	29
1159	28/10/2005	0	59	80	19	39	26	72	30
1759	28/10/2005	0	74	98	21	47	35	91	38
2359	28/10/2005	0	57	85	21	40	28	80	31
559	29/10/2005	0	58	84	19	39	26	75	28
1159	29/10/2005	0	60	87	19	39	27	76	30
1759	29/10/2005	0	65	99	24	48	34	92	38
2359	29/10/2005	0	61	87	20	41	26	77	31
559	30/10/2005	0	59	87	20	39	28	76	31
1159	30/10/2005	0	61	89	21	42	29	83	33
1759	30/10/2005	0	71	104	24	44	32	95	36
2359	30/10/2005	0	57	86	20	42	28	76	30
559	31/10/2005	0	57	78	20	40	26	73	31
1159	31/10/2005	0	57	82	18	37	25	69	29
1759	31/10/2005	0	66	92	23	43	35	82	34
2359	31/10/2005	0	59	85	20	38	27	77	29
559	01/11/2005	0	63	86	20	40	31	75	31
1159	01/11/2005	0	62	85	20	40	28	74	31
1759	01/11/2005	0	59	88	20	42	31	79	31
2359	01/11/2005	0	58	87	21	40	28	74	30
559	02/11/2005	0	61	88	21	42	29	82	30
1159	02/11/2005	0	61	86	20	41	27	75	30
1759	02/11/2005	0	63	91	21	44	32	81	32
2359	02/11/2005	0	60	90	21	42	33	79	34
559	03/11/2005	0	57	87	20	39	30	77	30
1159	03/11/2005	0	63	83	21	40	29	83	31
1759	03/11/2005	0	61	90	21	45	29	76	33
2359	03/11/2005	0	60	92	22	42	32	82	31
559	04/11/2005	0	62	92	21	43	33	84	31
1159	04/11/2005	0	63	91	21	44	30	79	31
1759	04/11/2005	0	63	89	21	44	31	82	32
2359	04/11/2005	0	60	94	22	44	29	80	33
559	05/11/2005	0	58	91	21	43	29	79	31
1159	05/11/2005	0	62	89	21	43	31	77	32
1759	05/11/2005	0	63	88	23	42	32	82	32
2359	05/11/2005	0	57	89	22	44	29	82	33
559	06/11/2005	0	61	90	21	44	32	83	31
1159	06/11/2005	0	59	90	21	42	30	80	32
1759	06/11/2005	0	62	91	22	44	32	81	32
2359	06/11/2005	0	57	86	21	41	28	82	30
559	07/11/2005	0	60	85	20	42	30	79	29
1159	07/11/2005	0	60	87	21	41	31	79	30
1759	07/11/2005	0	65	93	21	44	31	83	32
2359	07/11/2005	0	64	92	22	43	33	81	31
559	08/11/2005	0	63	89	21	43	34	80	30
1159	08/11/2005	0	64	90	21	42	32	80	29
1759	08/11/2005	0	64	91	22	45	33	83	32
2359	08/11/2005	0	61	88	21	43	30	76	30
559	09/11/2005	0	58	83	19	40	29	68	28

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	09/11/2005	0	64	90	21	43	32	78	29
1759	09/11/2005	0	70	93	22	45	32	80	32
2359	09/11/2005	0	69	96	22	46	33	82	31
559	10/11/2005	0	72	90	21	43	35	87	33
1159	10/11/2005	0	74	99	21	42	35	86	31
1759	10/11/2005	0	89	113	27	53	39	105	38
2359	10/11/2005	0	82	111	25	50	39	94	36
559	11/11/2005	0	76	96	24	48	34	87	32
1159	11/11/2005	0	69	92	22	44	31	80	30
1759	11/11/2005	0	74	103	23	48	41	95	34
2359	11/11/2005	0	66	89	20	43	33	76	29
559	12/11/2005	0	59	86	20	42	30	75	29
1159	12/11/2005	0	59	86	19	39	30	75	28
1759	12/11/2005	0	70	88	21	46	31	76	30
2359	12/11/2005	0	67	84	19	40	29	75	28
559	13/11/2005	0	65	80	19	39	27	73	30
1159	13/11/2005	0	80	83	20	40	28	75	29
1759	13/11/2005	0	96	87	21	43	30	76	30
2359	13/11/2005	0	47	87	21	42	28	73	28
559	14/11/2005	0	18	89	20	43	31	76	29
1159	14/11/2005	0	0	88	21	41	27	75	28
1759	14/11/2005	0	0	90	21	43	32	75	30
2359	14/11/2005	0	0	77	17	47	26	65	25
559	15/11/2005	0	0	65	22	35	25	61	31
1159	15/11/2005	0	0	77	17	33	21	60	22
1759	15/11/2005	0	0	87	19	39	29	70	26
2359	15/11/2005	0	0	83	19	37	24	65	24
559	16/11/2005	0	0	84	18	39	27	68	25
1159	16/11/2005	0	0	93	20	41	29	74	27
1759	16/11/2005	0	0	95	22	42	30	80	30
2359	16/11/2005	0	0	99	21	44	30	79	30
559	17/11/2005	0	0	97	21	42	28	78	27
1159	17/11/2005	0	0	105	23	44	33	78	29
1759	17/11/2005	0	0	115	23	47	36	89	31
2359	17/11/2005	0	0	121	24	49	40	95	34
559	18/11/2005	0	0	130	26	54	42	96	33
1159	18/11/2005	0	0	138	28	57	42	104	39
1759	18/11/2005	0	0	126	25	53	42	98	37
2359	18/11/2005	0	0	116	23	48	38	86	32
559	19/11/2005	0	0	119	24	49	37	89	32
1159	19/11/2005	0	0	135	26	53	39	104	35
1759	19/11/2005	0	0	148	30	63	49	124	40
2359	19/11/2005	0	0	140	29	57	46	113	38
559	20/11/2005	0	0	130	26	53	44	95	35
1159	20/11/2005	0	0	121	24	48	37	95	34
1759	20/11/2005	0	0	121	26	51	43	102	35
2359	20/11/2005	0	0	112	23	47	33	83	30
559	21/11/2005	0	0	111	25	47	38	90	32
1159	21/11/2005	0	0	110	24	48	36	90	31
1759	21/11/2005	0	0	118	25	48	36	90	33
2359	21/11/2005	0	0	115	25	55	38	101	32
559	22/11/2005	0	0	117	25	50	43	103	35
1159	22/11/2005	0	0	123	27	55	43	102	35
1759	22/11/2005	0	0	128	28	57	47	107	38
2359	22/11/2005	0	0	116	26	53	41	99	36
559	23/11/2005	0	0	106	26	52	39	92	34
1159	23/11/2005	0	0	103	24	48	38	86	32
1759	23/11/2005	0	0	102	23	47	33	89	31
2359	23/11/2005	0	0	100	23	48	36	89	31
559	24/11/2005	0	0	102	24	48	39	86	32
1159	24/11/2005	0	0	104	23	48	40	87	32
1759	24/11/2005	0	0	106	25	49	41	98	33
2359	24/11/2005	0	0	101	24	47	38	95	32
559	25/11/2005	0	0	94	23	46	38	87	31
1159	25/11/2005	0	0	100	24	48	39	89	31
1759	25/11/2005	0	0	100	23	48	36	91	31
2359	25/11/2005	0	0	99	23	49	36	93	31
559	26/11/2005	0	0	98	22	47	36	89	30
1159	26/11/2005	0	0	101	23	45	38	84	30
1759	26/11/2005	0	0	108	23	50	41	90	30

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 (Damaged)	20	30	45	70	90	100	180
2359	26/11/2005	0	1	104	21	47	37	86	30
559	27/11/2005	0	1	104	22	45	35	82	30
1159	27/11/2005	0	1	110	20	44	33	80	28
1759	27/11/2005	0	1	148	24	50	42	96	31
2359	27/11/2005	0	1	177	22	48	38	84	32
559	28/11/2005	0	1	87	23	48	40	86	31
1159	28/11/2005	0	1	1	24	47	36	82	31
1759	28/11/2005	0	1	2	23	47	35	81	31
2359	28/11/2005	0	1	2	22	45	36	85	30
559	29/11/2005	0	1	4	22	46	35	82	29
1159	29/11/2005	0	1	5	23	45	36	82	29
1759	29/11/2005	0	1	8	23	45	36	84	28
2359	29/11/2005	0	1	8	22	44	34	77	29
559	30/11/2005	0	1	9	23	45	35	79	28
1159	30/11/2005	0	0	10	22	43	34	77	27
1759	30/11/2005	0	1	13	24	45	37	80	29
2359	30/11/2005	0	1	13	24	47	35	83	28
559	01/12/2005	0	1	14	25	45	34	81	28
1159	01/12/2005	0	1	17	25	44	37	81	29
1759	01/12/2005	0	1	19	27	47	34	86	29
2359	01/12/2005	0	1	19	29	46	35	78	30
559	02/12/2005	0	1	19	31	45	35	82	30
1159	02/12/2005	0	1	20	32	45	35	80	29
1759	02/12/2005	0	1	24	35	44	36	82	28
2359	02/12/2005	0	1	21	40	46	35	77	28
559	03/12/2005	0	1	23	43	48	36	81	28
1159	03/12/2005	0	1	24	46	48	37	79	28
1759	03/12/2005	0	1	25	47	48	37	83	30
2359	03/12/2005	0	1	23	34	47	37	80	28
559	04/12/2005	0	1	24	16	48	35	79	29
1159	04/12/2005	0	1	24	0	48	37	78	28
1759	04/12/2005	0	1	26	0	49	37	83	31
2359	04/12/2005	0	1	25	0	47	35	79	28
559	05/12/2005	0	1	27	0	46	34	74	25
1159	05/12/2005	0	0	29	0	43	28	65	26
1759	05/12/2005	0	0	34	0	45	34	72	27
2359	05/12/2005	0	2	37	0	47	32	73	26
559	06/12/2005	0	4	31	0	43	21	68	23
1159	06/12/2005	0	0	46	0	45	31	67	24
1759	06/12/2005	0	0	53	0	48	32	69	25
2359	06/12/2005	0	0	57	0	47	32	72	26
559	07/12/2005	0	0	61	0	48	33	70	25
1159	07/12/2005	0	0	66	0	50	34	73	24
1759	07/12/2005	0	1	78	0	58	44	89	31
2359	07/12/2005	0	1	75	0	62	45	94	32
559	08/12/2005	0	1	69	0	63	45	90	31
1159	08/12/2005	0	1	57	0	58	44	83	30
1759	08/12/2005	0	1	56	0	61	44	89	32
2359	08/12/2005	0	1	54	0	64	51	92	31
559	09/12/2005	0	2	54	0	71	57	110	35
1159	09/12/2005	0	2	48	0	69	52	108	37
1759	09/12/2005	0	1	30	0	73	50	112	38
2359	09/12/2005	0	0	22	0	76	57	106	37
559	10/12/2005	0	0	16	0	74	55	101	34
1159	10/12/2005	0	0	11	0	75	54	99	32
1759	10/12/2005	0	0	13	0	75	55	108	36
2359	10/12/2005	0	0	12	0	80	57	111	36
559	11/12/2005	0	0	11	0	78	55	107	37
1159	11/12/2005	0	0	8	0	80	54	105	31
1759	11/12/2005	0	0	10	0	85	61	103	36
2359	11/12/2005	0	0	9	0	80	57	95	31
559	12/12/2005	0	1	9	0	82	58	98	31
1159	12/12/2005	0	1	10	0	80	54	93	31
1759	12/12/2005	0	3	13	0	84	64	105	35
2359	12/12/2005	0	2	13	0	89	64	100	36
559	13/12/2005	0	2	15	0	89	63	106	35
1159	13/12/2005	0	2	16	0	82	60	99	32
1759	13/12/2005	0	2	16	0	85	65	102	33
2359	13/12/2005	0	2	16	0	79	61	91	32
559	14/12/2005	0	3	16	0	86	62	95	31



MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	14/12/2005	0	2	17	0	83	63	97	33
1759	14/12/2005	0	1	18	0	83	62	91	29
2359	14/12/2005	0	2	17	0	78	56	83	28
559	15/12/2005	0	2	16	0	72	53	79	28
1159	15/12/2005	0	3	21	0	79	58	84	30
1759	15/12/2005	0	2	22	0	79	55	82	29
2359	15/12/2005	0	2	23	0	75	55	77	27
559	16/12/2005	0	2	25	0	75	53	79	26
1159	16/12/2005	0	1	29	0	75	52	75	26
1759	16/12/2005	0	2	34	0	79	59	80	28
2359	16/12/2005	0	2	39	0	74	55	74	27
559	17/12/2005	0	2	45	0	78	55	77	29
1159	17/12/2005	0	1	51	0	78	56	71	27
1759	17/12/2005	0	2	62	0	83	63	80	27
2359	17/12/2005	0	2	66	0	87	61	84	27
559	18/12/2005	0	2	69	0	84	64	79	28
1159	18/12/2005	0	2	75	0	91	64	80	28
1759	18/12/2005	0	3	83	0	104	78	97	31
2359	18/12/2005	0	3	78	0	103	75	92	32
559	19/12/2005	0	3	76	0	105	73	90	31
1159	19/12/2005	0	4	83	0	113	75	96	32
1759	19/12/2005	0	3	83	0	125	84	102	33
2359	19/12/2005	0	3	73	0	126	81	103	36
559	20/12/2005	0	3	64	0	126	73	88	30
1159	20/12/2005	0	2	65	0	124	72	87	28
1759	20/12/2005	0	3	69	0	137	75	88	32
2359	20/12/2005	0	3	68	0	130	70	85	30
559	21/12/2005	0	3	77	0	248	80	96	31
1159	21/12/2005	0	3	78	0	125	82	97	32
1759	21/12/2005	0	5	90	0	21	97	111	37
2359	21/12/2005	0	3	73	0	2	101	110	35
559	22/12/2005	0	4	69	0	0	97	105	35
1159	22/12/2005	0	3	59	0	0	91	95	31
1759	22/12/2005	0	3	61	0	0	99	102	36
2359	22/12/2005	0	3	57	0	0	107	110	38
559	23/12/2005	0	4	53	0	0	101	110	36
1159	23/12/2005	0	3	47	0	0	95	94	33
1759	23/12/2005	0	3	47	0	0	98	100	32
2359	23/12/2005	0	3	47	0	0	107	97	33
559	24/12/2005	0	3	44	0	0	101	97	33
1159	24/12/2005	0	3	45	0	0	101	92	32
1759	24/12/2005	0	3	55	0	0	111	99	36
2359	24/12/2005	0	3	57	0	0	122	109	35
559	25/12/2005	0	3	54	0	0	125	112	36
1159	25/12/2005	0	3	48	0	0	116	104	35
1759	25/12/2005	0	4	45	0	1	132	106	36
2359	25/12/2005	0	3	41	0	1	120	107	33
559	26/12/2005	0	4	43	0	1	128	111	36
1159	26/12/2005	0	3	40	0	1	126	100	33
1759	26/12/2005	0	3	40	0	1	135	108	34
2359	26/12/2005	0	3	39	0	1	122	97	34
559	27/12/2005	0	3	42	0	1	129	97	32
1159	27/12/2005	0	3	43	0	1	125	100	31
1759	27/12/2005	0	3	46	0	1	142	101	34
2359	27/12/2005	0	3	44	0	1	144	100	36
559	28/12/2005	0	3	44	0	2	150	108	35
1159	28/12/2005	0	4	43	0	2	148	106	34
1759	28/12/2005	0	3	42	0	3	156	106	37
2359	28/12/2005	0	3	37	0	3	160	109	36
559	29/12/2005	0	3	36	0	2	160	106	36
1159	29/12/2005	0	3	36	0	2	162	104	35
1759	29/12/2005	0	2	36	0	2	162	104	36
2359	29/12/2005	0	3	33	0	2	167	108	31
559	30/12/2005	0	3	31	0	3	170	107	34
1159	30/12/2005	0	3	34	0	3	172	103	34
1759	30/12/2005	0	3	34	0	2	169	95	34
2359	30/12/2005	0	3	31	0	2	169	101	34
559	31/12/2005	0	3	36	0	2	175	108	34
1159	31/12/2005	0	3	36	0	3	168	100	35
1759	31/12/2005	0	3	37	0	3	192	106	35

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	31/12/2005	0	3	36	0	3	192	103	34
559	01/01/2006	0	3	36	0	4	203	106	37
1159	01/01/2006	0	3	35	0	3	199	113	37
1759	01/01/2006	0	3	34	0	4	208	108	37
2359	01/01/2006	0	2	32	0	4	218	104	37
559	02/01/2006	0	2	32	0	4	226	115	35
1159	02/01/2006	0	3	31	0	4	228	113	37
1759	02/01/2006	0	2	30	0	3	221	107	36
2359	02/01/2006	0	2	28	0	4	227	113	37
559	03/01/2006	0	2	28	0	4	229	114	36
1159	03/01/2006	0	2	27	0	4	248	108	35
1759	03/01/2006	0	1	25	0	4	218	100	35
2359	03/01/2006	0	2	24	0	3	223	100	31
559	04/01/2006	0	2	27	0	3	220	96	33
1159	04/01/2006	0	2	32	0	4	230	100	32
1759	04/01/2006	0	3	36	0	3	220	99	33
2359	04/01/2006	0	2	38	0	3	240	96	32
559	05/01/2006	0	3	44	0	4	244	104	33
1159	05/01/2006	0	2	44	0	5	238	99	32
1759	05/01/2006	0	3	50	0	5	245	98	36
2359	05/01/2006	0	3	51	0	5	252	98	33
559	06/01/2006	0	3	49	0	6	269	102	36
1159	06/01/2006	0	3	47	0	5	264	92	34
1759	06/01/2006	0	3	47	0	5	262	100	32
2359	06/01/2006	0	3	44	0	6	265	101	33
559	07/01/2006	0	2	42	0	7	268	94	32
1159	07/01/2006	0	2	43	0	5	271	93	33
1759	07/01/2006	0	3	44	0	6	271	101	35
2359	07/01/2006	0	2	42	0	6	270	93	31
559	08/01/2006	0	2	41	0	6	280	95	31
1159	08/01/2006	0	2	43	0	7	279	94	32
1759	08/01/2006	0	2	49	0	7	324	102	32
2359	08/01/2006	0	3	47	0	7	314	97	34
559	09/01/2006	0	3	47	0	8	310	94	31
1159	09/01/2006	0	3	50	0	7	307	92	31
1759	09/01/2006	0	3	55	0	8	332	100	33
2359	09/01/2006	0	3	57	0	8	358	103	36
559	10/01/2006	0	2	57	0	7	339	96	32
1159	10/01/2006	0	3	54	0	9	343	97	33
1759	10/01/2006	0	3	57	0	9	381	101	36
2359	10/01/2006	0	3	58	0	10	399	103	35
559	11/01/2006	0	3	53	0	9	417	101	35
1159	11/01/2006	0	2	51	0	9	403	96	32
1759	11/01/2006	0	3	54	0	10	418	102	34
2359	11/01/2006	0	3	52	0	10	447	105	36
559	12/01/2006	0	3	48	0	11	442	100	34
1159	12/01/2006	0	2	49	0	10	395	93	31
1759	12/01/2006	0	2	47	0	10	441	90	32
2359	12/01/2006	0	2	44	0	9	419	89	31
559	13/01/2006	0	2	46	0	9	446	91	32
1159	13/01/2006	0	2	46	0	11	483	93	31
1759	13/01/2006	0	2	50	0	10	494	100	31
2359	13/01/2006	0	2	49	0	10	501	96	31
559	14/01/2006	0	2	51	0	10	556	95	34
1159	14/01/2006	0	3	54	0	12	581	101	35
1759	14/01/2006	0	2	51	0	12	609	102	34
2359	14/01/2006	0	3	54	0	12	644	99	33
559	15/01/2006	0	3	49	0	11	635	98	35
1159	15/01/2006	0	2	49	0	11	651	93	32
1759	15/01/2006	0	3	46	0	12	675	93	33
2359	15/01/2006	0	2	46	0	11	691	93	33
559	16/01/2006	0	3	49	0	12	711	95	34
1159	16/01/2006	0	2	43	0	9	595	86	28
1759	16/01/2006	0	3	52	0	13	772	95	33
2359	16/01/2006	0	2	52	0	12	769	90	29
559	17/01/2006	0	2	59	0	13	785	95	32
1159	17/01/2006	0	3	59	0	13	749	93	30
1759	17/01/2006	0	2	58	0	13	711	96	32
2359	17/01/2006	0	3	62	0	15	610	98	32
559	18/01/2006	0	2	58	0	14	753	94	32

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	18/01/2006	0	2	54	0	13	656	88	30
1759	18/01/2006	0	2	53	0	13	528	91	30
2359	18/01/2006	0	2	53	0	13	442	89	30
559	19/01/2006	0	2	61	0	14	457	78	29
1159	19/01/2006	0	1	49	0	11	358	76	26
1759	19/01/2006	0	2	55	0	13	309	88	31
2359	19/01/2006	0	4	63	0	12	178	79	28
559	20/01/2006	0	1	63	0	16	136	75	25
1159	20/01/2006	0	3	57	0	16	137	78	26
1759	20/01/2006	0	1	61	0	13	132	81	28
2359	20/01/2006	0	3	62	0	12	108	77	26
559	21/01/2006	0	2	66	0	13	111	77	28
1159	21/01/2006	0	1	61	0	11	102	74	24
1759	21/01/2006	0	2	74	0	17	124	91	30
2359	21/01/2006	0	2	80	0	18	125	100	33
559	22/01/2006	0	3	82	0	19	128	100	32
1159	22/01/2006	0	4	89	0	20	140	106	36
1759	22/01/2006	0	4	93	1	23	151	118	40
2359	22/01/2006	0	4	91	0	22	145	123	39
559	23/01/2006	0	3	88	0	23	135	111	39
1159	23/01/2006	0	4	80	1	22	131	118	38
1759	23/01/2006	0	4	79	1	23	133	113	38
2359	23/01/2006	0	2	63	0	20	102	96	35
559	24/01/2006	0	2	53	0	18	93	84	30
1159	24/01/2006	0	1	57	0	18	88	84	30
1759	24/01/2006	0	2	63	0	20	91	89	32
2359	24/01/2006	0	2	64	0	19	91	90	31
559	25/01/2006	0	2	67	0	19	91	87	30
1159	25/01/2006	0	1	66	0	17	79	83	28
1759	25/01/2006	0	3	83	1	24	102	110	36
2359	25/01/2006	0	3	77	0	20	89	95	31
559	26/01/2006	0	2	69	0	21	82	88	31
1159	26/01/2006	0	2	75	0	20	79	87	31
1759	26/01/2006	0	2	72	0	21	80	87	30
2359	26/01/2006	0	2	71	0	20	73	85	28
559	27/01/2006	0	3	83	0	19	85	80	26
1159	27/01/2006	0	4	72	0	19	68	79	28
1759	27/01/2006	0	2	82	0	22	71	82	27
2359	27/01/2006	0	2	82	0	23	73	84	29
559	28/01/2006	0	2	82	0	24	71	90	28
1159	28/01/2006	0	2	85	0	23	72	89	31
1759	28/01/2006	0	3	95	1	26	82	93	32
2359	28/01/2006	0	2	95	1	26	76	94	32
559	29/01/2006	0	3	91	0	28	74	97	32
1159	29/01/2006	0	2	88	0	28	73	92	31
1759	29/01/2006	0	3	99	1	31	81	104	33
2359	29/01/2006	0	3	94	1	31	79	103	32
559	30/01/2006	0	2	86	0	28	71	95	34
1159	30/01/2006	0	2	86	0	29	71	90	30
1759	30/01/2006	0	2	85	1	30	72	96	32
2359	30/01/2006	0	2	83	0	27	69	87	30
559	31/01/2006	0	1	79	0	27	64	81	28
1159	31/01/2006	0	1	74	0	25	61	77	24
1759	31/01/2006	0	2	90	0	30	73	90	31
2359	31/01/2006	0	2	90	0	32	73	90	30
559	01/02/2006	0	2	98	1	33	76	97	35
1159	01/02/2006	0	2	93	0	32	70	90	30
1759	01/02/2006	0	4	106	2	37	87	107	36
2359	01/02/2006	0	2	97	1	35	77	101	33
559	02/02/2006	0	3	96	1	35	79	100	33
1159	02/02/2006	0	2	92	0	36	74	97	31
1759	02/02/2006	0	4	114	2	47	102	128	40
2359	02/02/2006	0	4	107	1	42	87	121	35
559	03/02/2006	0	3	99	1	40	82	121	35
1159	03/02/2006	0	3	96	0	37	76	122	31
1759	03/02/2006	0	4	111	1	46	100	146	37
2359	03/02/2006	0	3	110	2	45	95	137	39
559	04/02/2006	0	3	100	1	42	83	72	35
1159	04/02/2006	0	3	97	1	43	84	17	31
1759	04/02/2006	0	3	108	2	44	96	8	35

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	04/02/2006	0	3	106	1	47	93	8	35
559	05/02/2006	0	2	101	1	47	94	5	36
1159	05/02/2006	0	3	97	1	43	94	6	37
1759	05/02/2006	0	3	95	1	45	95	7	34
2359	05/02/2006	0	3	94	1	43	88	9	34
559	06/02/2006	0	3	91	1	45	90	8	35
1159	06/02/2006	0	2	87	0	41	85	9	30
1759	06/02/2006	0	2	99	1	45	92	13	34
2359	06/02/2006	0	2	90	0	43	92	12	29
559	07/02/2006	0	3	89	1	44	98	14	34
1159	07/02/2006	0	2	88	1	44	92	15	31
1759	07/02/2006	0	3	96	1	48	104	19	36
2359	07/02/2006	0	3	95	1	50	105	20	36
559	08/02/2006	0	3	95	1	50	108	24	38
1159	08/02/2006	0	3	99	1	52	116	25	38
1759	08/02/2006	0	4	111	2	58	132	30	40
2359	08/02/2006	0	3	96	2	57	125	28	38
559	09/02/2006	0	3	95	2	57	122	31	39
1159	09/02/2006	0	3	95	2	50	123	28	38
1759	09/02/2006	0	4	93	2	52	124	33	39
2359	09/02/2006	0	3	84	1	52	113	28	35
559	10/02/2006	0	2	71	1	44	100	26	35
1159	10/02/2006	0	2	71	0	43	100	25	31
1759	10/02/2006	0	3	88	1	50	119	30	37
2359	10/02/2006	0	3	87	1	51	111	29	37
559	11/02/2006	0	3	88	1	50	111	28	36
1159	11/02/2006	0	2	83	1	47	103	27	32
1759	11/02/2006	0	4	100	2	55	128	36	39
2359	11/02/2006	0	3	95	1	54	127	33	39
559	12/02/2006	0	2	88	1	49	113	32	36
1159	12/02/2006	0	3	101	1	49	118	34	41
1759	12/02/2006	0	6	116	3	65	146	42	42
2359	12/02/2006	0	3	91	2	51	125	34	36
559	13/02/2006	0	3	97	2	52	122	34	37
1159	13/02/2006	0	4	98	1	60	138	40	40
1759	13/02/2006	0	4	92	2	61	143	40	42
2359	13/02/2006	0	2	70	1	50	116	34	35
559	14/02/2006	0	2	63	0	46	103	29	31
1159	14/02/2006	0	1	62	0	41	95	28	29
1759	14/02/2006	0	2	75	1	45	108	34	32
2359	14/02/2006	0	2	74	0	42	97	30	29
559	15/02/2006	0	1	81	0	40	89	29	29
1159	15/02/2006	0	1	84	0	43	91	28	28
1759	15/02/2006	0	2	85	0	42	102	31	33
2359	15/02/2006	0	2	70	0	32	74	29	26
559	16/02/2006	0	1	77	0	40	87	26	25
1159	16/02/2006	0	0	72	0	29	79	24	23
1759	16/02/2006	0	2	88	0	47	108	34	30
2359	16/02/2006	0	1	82	0	45	97	30	28
559	17/02/2006	0	2	89	0	50	108	34	30
1159	17/02/2006	0	2	89	0	49	110	33	28
1759	17/02/2006	0	4	111	1	61	132	43	36
2359	17/02/2006	0	3	96	0	56	118	37	32
559	18/02/2006	0	2	99	1	59	132	40	34
1159	18/02/2006	0	2	98	0	59	127	41	32
1759	18/02/2006	0	4	115	1	70	169	51	39
2359	18/02/2006	0	3	112	2	67	153	47	35
559	19/02/2006	0	4	110	2	69	169	51	37
1159	19/02/2006	0	4	109	1	68	183	54	36
1759	19/02/2006	0	4	115	1	71	180	57	38
2359	19/02/2006	0	2	92	1	62	155	46	31
559	20/02/2006	0	3	101	1	62	161	50	33
1159	20/02/2006	0	2	95	0	63	169	49	33
1759	20/02/2006	0	3	108	1	70	197	55	35
2359	20/02/2006	0	3	107	1	66	200	56	36
559	21/02/2006	0	3	108	1	67	203	61	36
1159	21/02/2006	0	2	97	0	62	192	53	31
1759	21/02/2006	0	4	118	2	74	244	65	39
2359	21/02/2006	0	2	97	1	64	193	57	33
559	22/02/2006	0	2	89	0	57	185	53	34

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	22/02/2006	0	2	93	0	59	199	55	31
1759	22/02/2006	0	4	109	2	72	256	72	37
2359	22/02/2006	0	2	100	1	64	211	59	33
559	23/02/2006	0	2	97	1	62	219	62	34
1159	23/02/2006	0	2	96	0	62	218	61	34
1759	23/02/2006	0	3	100	1	65	240	66	34
2359	23/02/2006	0	2	93	1	60	209	58	31
559	24/02/2006	0	2	93	0	60	213	61	30
1159	24/02/2006	0	2	91	0	59	220	60	31
1759	24/02/2006	0	3	96	1	63	235	67	33
2359	24/02/2006	0	2	93	1	63	230	67	31
559	25/02/2006	0	1	82	0	55	205	56	29
1159	25/02/2006	0	2	88	0	55	215	58	28
1759	25/02/2006	0	3	99	1	62	271	72	35
2359	25/02/2006	0	2	90	1	58	234	63	32
559	26/02/2006	0	1	82	0	66	274	45	29
1159	26/02/2006	0	1	81	0	52	220	57	27
1759	26/02/2006	0	2	96	1	64	282	75	33
2359	26/02/2006	0	2	90	1	57	264	67	30
559	27/02/2006	0	2	91	0	58	282	67	31
1159	27/02/2006	0	1	92	0	60	275	69	30
1759	27/02/2006	0	3	98	1	65	313	78	33
2359	27/02/2006	0	2	101	1	65	336	78	34
559	28/02/2006	0	3	99	1	65	334	78	35
1159	28/02/2006	0	2	97	1	63	346	80	31
1759	28/02/2006	0	4	116	2	76	459	95	42
2359	28/02/2006	0	2	100	1	63	350	80	32
559	01/03/2006	0	2	95	1	62	361	78	32
1159	01/03/2006	0	2	92	0	62	373	78	32
1759	01/03/2006	0	3	104	1	66	455	93	34
2359	01/03/2006	0	3	98	1	63	440	87	33
559	02/03/2006	0	2	91	0	60	379	81	31
1159	02/03/2006	0	1	88	0	56	375	78	29
1759	02/03/2006	0	4	112	2	75	585	108	40
2359	02/03/2006	0	2	100	1	61	469	95	33
559	03/03/2006	0	2	97	1	64	469	93	31
1159	03/03/2006	0	1	90	0	60	468	91	31
1759	03/03/2006	0	4	114	2	76	670	116	39
2359	03/03/2006	0	3	108	1	67	621	106	35
559	04/03/2006	0	3	103	1	65	619	115	34
1159	04/03/2006	0	3	103	1	67	646	112	35
1759	04/03/2006	0	4	113	2	75	818	125	40
2359	04/03/2006	0	3	106	1	66	689	116	37
559	05/03/2006	0	2	96	1	65	648	110	33
1159	05/03/2006	0	2	99	1	64	693	116	31
1759	05/03/2006	0	4	119	2	78	961	139	41
2359	05/03/2006	0	3	110	1	69	836	129	37
559	06/03/2006	0	2	104	1	68	791	132	36
1159	06/03/2006	0	3	106	1	70	862	130	37
1759	06/03/2006	0	4	121	3	82	1211	149	41
2359	06/03/2006	0	3	107	2	75	905	141	38
559	07/03/2006	0	3	101	1	66	856	131	35
1159	07/03/2006	0	3	109	2	69	1013	140	38
1759	07/03/2006	0	5	133	3	88	1629	180	44
2359	07/03/2006	0	4	115	2	72	1298	168	41
559	08/03/2006	0	3	110	2	72	1087	146	38
1159	08/03/2006	0	4	122	2	75	1183	152	37
1759	08/03/2006	0	5	133	3	88	1876	205	43
2359	08/03/2006	0	5	131	2	83	1860	183	42
559	09/03/2006	0	3	119	2	74	1415	178	41
1159	09/03/2006	0	4	118	2	73	1288	171	41
1759	09/03/2006	0	4	119	2	79	1364	162	41
2359	09/03/2006	0	3	114	1	74	1240	173	40
559	10/03/2006	0	3	119	2	75	1286	169	39
1159	10/03/2006	0	3	114	2	75	1178	159	38
1759	10/03/2006	0	3	114	1	74	1192	174	39
2359	10/03/2006	0	3	108	1	69	978	157	40
559	11/03/2006	0	3	106	2	75	906	145	38
1159	11/03/2006	0	3	106	1	70	874	141	37
1759	11/03/2006	0	3	113	2	73	907	153	36

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	11/03/2006	0	2	100	1	66	701	128	37
559	12/03/2006	0	2	93	1	59	612	113	32
1159	12/03/2006	0	2	102	1	65	683	129	34
1759	12/03/2006	0	4	117	3	80	990	170	41
2359	12/03/2006	0	3	104	2	70	693	132	35
559	13/03/2006	0	2	96	1	65	602	127	34
1159	13/03/2006	0	2	98	1	64	718	131	31
1759	13/03/2006	0	4	114	1	74	1036	157	41
2359	13/03/2006	0	3	108	1	68	838	140	36
559	14/03/2006	0	2	100	1	66	741	126	33
1159	14/03/2006	0	2	92	0	61	673	124	34
1759	14/03/2006	0	3	106	1	69	881	147	35
2359	14/03/2006	0	3	102	1	68	928	149	36
559	15/03/2006	0	2	105	1	70	848	150	36
1159	15/03/2006	0	2	103	1	70	1045	150	34
1759	15/03/2006	0	4	124	2	80	1404	169	41
2359	15/03/2006	0	3	109	2	73	1156	171	38
559	16/03/2006	0	3	105	1	72	991	155	37
1159	16/03/2006	0	3	103	1	70	1212	170	36
1759	16/03/2006	0	4	118	2	75	1456	186	44
2359	16/03/2006	0	3	112	2	72	1338	173	39
559	17/03/2006	0	3	103	2	66	1161	166	36
1159	17/03/2006	0	2	102	1	67	1158	150	35
1759	17/03/2006	0	3	114	2	78	1622	195	39
2359	17/03/2006	0	3	114	1	73	1431	177	41
559	18/03/2006	0	3	113	1	74	1437	170	37
1159	18/03/2006	0	3	106	1	71	1387	177	36
1759	18/03/2006	0	3	115	2	76	1844	197	39
2359	18/03/2006	0	3	113	2	74	1620	186	39
559	19/03/2006	0	4	115	2	74	1610	180	38
1159	19/03/2006	0	4	109	1	69	1575	190	36
1759	19/03/2006	0	4	110	2	71	1711	204	40
2359	19/03/2006	0	4	120	2	73	1744	197	39
559	20/03/2006	0	3	114	2	73	1714	191	38
1159	20/03/2006	0	3	110	1	75	1568	194	38
1759	20/03/2006	0	4	125	2	79	2493	222	43
2359	20/03/2006	0	3	114	2	71	1703	211	42
559	21/03/2006	0	4	112	2	77	1657	199	39
1159	21/03/2006	0	4	122	1	76	1698	184	40
1759	21/03/2006	0	4	132	3	80	2333	234	46
2359	21/03/2006	0	4	123	3	75	1718	212	43
559	22/03/2006	0	3	115	2	76	1524	189	40
1159	22/03/2006	0	3	107	2	71	1286	188	40
1759	22/03/2006	0	4	125	3	79	1913	218	43
2359	22/03/2006	0	4	114	2	77	1558	193	42
559	23/03/2006	0	3	108	2	73	1197	180	40
1159	23/03/2006	0	3	116	2	76	1403	175	43
1759	23/03/2006	0	5	128	3	87	1875	226	45
2359	23/03/2006	0	3	110	2	75	1301	190	41
559	24/03/2006	0	3	94	2	71	1056	174	40
1159	24/03/2006	0	3	101	3	77	1172	180	41
1759	24/03/2006	0	3	100	3	88	1399	208	47
2359	24/03/2006	0	2	89	2	79	1001	184	43
559	25/03/2006	0	2	77	2	76	784	171	41
1159	25/03/2006	0	1	75	2	80	780	167	41
1759	25/03/2006	0	1	75	2	80	731	177	45
2359	25/03/2006	0	1	66	2	77	769	164	42
559	26/03/2006	0	1	61	1	71	542	144	43
1159	26/03/2006	0	1	59	2	74	504	142	43
1759	26/03/2006	0	0	57	2	79	502	150	44
2359	26/03/2006	0	0	51	2	73	449	128	41
559	27/03/2006	0	0	47	1	71	395	124	41
1159	27/03/2006	0	0	46	1	67	383	127	40
1759	27/03/2006	0	0	47	2	77	403	140	45
2359	27/03/2006	0	0	40	1	67	321	111	42
559	28/03/2006	0	0	36	1	65	289	106	40
1159	28/03/2006	0	0	34	1	64	280	102	40
1759	28/03/2006	0	0	38	2	72	330	119	46
2359	28/03/2006	0	0	32	0	60	252	92	38
559	29/03/2006	0	0	30	0	58	225	88	37

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	29/03/2006	0	0	29	0	61	229	91	40
1759	29/03/2006	0	0	38	1	68	271	111	50
2359	29/03/2006	0	0	33	0	60	237	95	42
559	30/03/2006	0	0	31	0	57	212	93	41
1159	30/03/2006	0	0	34	1	62	237	99	40
1759	30/03/2006	0	0	38	2	68	267	115	51
2359	30/03/2006	0	0	32	0	59	218	91	44
559	31/03/2006	0	0	31	0	54	192	86	42
1159	31/03/2006	0	0	31	0	57	206	90	43
1759	31/03/2006	0	0	38	1	65	255	109	52
2359	31/03/2006	0	0	28	0	50	196	85	44
559	01/04/2006	0	0	24	0	48	169	77	42
1159	01/04/2006	0	0	24	0	47	172	78	40
1759	01/04/2006	0	0	26	0	50	191	86	44
2359	01/04/2006	0	0	23	0	46	165	77	40
559	02/04/2006	0	0	21	0	40	151	62	39
1159	02/04/2006	0	0	22	0	45	173	78	42
1759	02/04/2006	0	0	26	0	49	204	94	50
2359	02/04/2006	0	0	24	0	45	177	82	45
559	03/04/2006	0	0	20	0	40	156	74	43
1159	03/04/2006	0	0	23	0	42	182	86	47
1759	03/04/2006	0	0	26	0	57	230	105	60
2359	03/04/2006	0	0	21	0	45	168	82	43
559	04/04/2006	0	0	19	0	39	166	70	45
1159	04/04/2006	0	0	20	0	41	176	77	47
1759	04/04/2006	0	0	25	0	47	204	93	57
2359	04/04/2006	0	0	18	0	40	164	76	44
559	05/04/2006	0	0	17	0	35	149	70	45
1159	05/04/2006	0	0	18	0	41	161	73	47
1759	05/04/2006	0	0	21	0	44	218	97	59
2359	05/04/2006	0	5	16	0	38	155	71	45
559	06/04/2006	0	4	14	0	33	142	64	43
1159	06/04/2006	0	4	14	0	35	150	71	45
1759	06/04/2006	0	6	16	0	38	172	75	52
2359	06/04/2006	0	5	14	0	34	160	68	43
559	07/04/2006	0	6	13	0	34	158	65	42
1159	07/04/2006	0	5	13	0	33	159	69	47
1759	07/04/2006	0	6	13	0	34	171	72	51
2359	07/04/2006	0	4	12	0	32	154	62	45
559	08/04/2006	0	5	11	0	28	142	58	43
1159	08/04/2006	0	5	10	0	28	142	56	44
1759	08/04/2006	0	6	14	0	34	176	65	50
2359	08/04/2006	0	4	11	0	28	151	60	44
559	09/04/2006	0	5	10	0	26	150	58	45
1159	09/04/2006	0	5	10	0	27	158	54	45
1759	09/04/2006	0	6	13	0	31	171	65	49
2359	09/04/2006	0	5	11	0	27	162	60	49
559	10/04/2006	0	4	2	0	27	143	55	47
1159	10/04/2006	0	7	0	0	27	171	60	47
1759	10/04/2006	0	6	0	0	31	185	66	58
2359	10/04/2006	0	4	0	0	24	149	56	47
559	11/04/2006	0	5	30	0	23	141	48	43
1159	11/04/2006	0	6	43	0	22	156	54	45
1759	11/04/2006	0	8	51	0	28	191	59	59
2359	11/04/2006	0	6	31	0	22	158	49	45
559	12/04/2006	0	5	30	0	20	136	42	41
1159	12/04/2006	0	8	37	0	23	167	46	50
1759	12/04/2006	0	11	48	0	27	205	54	60
2359	12/04/2006	0	10	38	0	25	181	47	50
559	13/04/2006	0	10	33	0	20	158	41	46
1159	13/04/2006	0	11	37	0	23	170	44	50
1759	13/04/2006	0	10	39	0	23	187	44	55
2359	13/04/2006	0	9	34	0	18	161	38	45
559	14/04/2006	0	9	33	0	19	155	36	44
1159	14/04/2006	0	13	39	0	19	178	38	49
1759	14/04/2006	0	15	46	0	25	215	45	60
2359	14/04/2006	0	13	37	0	18	180	36	49
559	15/04/2006	0	14	37	0	19	184	34	47
1159	15/04/2006	0	12	36	0	16	167	31	42
1759	15/04/2006	0	16	41	0	19	209	37	53

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 (Damaged)	20	30	45	70	90	100	180
2359	15/04/2006	0	15	35	0	17	175	30	46
559	16/04/2006	0	14	33	0	14	155	27	39
1159	16/04/2006	0	17	37	0	15	175	29	45
1759	16/04/2006	0	19	47	0	20	220	35	50
2359	16/04/2006	0	17	38	0	15	176	27	44
559	17/04/2006	0	16	38	0	14	170	24	46
1159	17/04/2006	0	16	41	0	13	185	23	42
1759	17/04/2006	0	19	51	0	17	232	33	54
2359	17/04/2006	0	17	43	0	14	198	24	47
559	18/04/2006	0	17	42	0	13	180	23	43
1159	18/04/2006	0	23	48	2	15	249	28	54
1759	18/04/2006	0	24	56	5	18	301	34	61
2359	18/04/2006	0	19	47	4	13	224	24	52
559	19/04/2006	0	19	40	2	11	197	21	44
1159	19/04/2006	0	28	51	4	16	279	26	57
1759	19/04/2006	0	26	59	5	17	339	32	63
2359	19/04/2006	0	21	46	4	13	268	24	52
559	20/04/2006	0	23	44	3	10	240	22	49
1159	20/04/2006	0	28	53	4	13	308	25	54
1759	20/04/2006	0	28	58	6	16	377	29	63
2359	20/04/2006	0	21	48	4	12	294	26	51
559	21/04/2006	0	23	41	3	8	261	22	46
1159	21/04/2006	0	29	51	4	9	304	23	54
1759	21/04/2006	0	32	58	5	11	355	27	57
2359	21/04/2006	0	26	46	3	7	281	21	51
559	22/04/2006	0	24	39	2	4	236	17	46
1159	22/04/2006	0	23	41	2	3	234	17	43
1759	22/04/2006	0	29	47	3	3	294	20	48
2359	22/04/2006	0	25	42	2	2	255	17	45
559	23/04/2006	0	23	41	2	0	241	15	43
1159	23/04/2006	0	31	49	3	1	316	19	47
1759	23/04/2006	0	33	58	5	2	451	24	59
2359	23/04/2006	0	25	45	3	0	320	19	48
559	24/04/2006	0	25	43	3	0	279	16	47
1159	24/04/2006	0	33	53	4	1	382	21	56
1759	24/04/2006	0	37	64	5	3	527	29	69
2359	24/04/2006	0	27	55	5	1	386	25	57
559	25/04/2006	0	27	44	3	0	290	17	46
1159	25/04/2006	0	34	58	4	0	362	24	55
1759	25/04/2006	0	37	67	6	0	511	29	74
2359	25/04/2006	0	29	54	5	0	357	22	58
559	26/04/2006	0	30	45	4	0	339	18	54
1159	26/04/2006	0	37	58	4	4	459	23	57
1759	26/04/2006	0	39	66	6	29	601	28	71
2359	26/04/2006	0	31	51	4	19	437	21	53
559	27/04/2006	0	30	46	3	17	369	18	44
1159	27/04/2006	0	38	57	4	20	458	22	57
1759	27/04/2006	0	38	61	5	23	640	24	60
2359	27/04/2006	0	34	52	4	20	483	22	52
559	28/04/2006	0	31	48	2	15	379	16	45
1159	28/04/2006	0	45	63	4	23	691	26	63
1759	28/04/2006	0	46	73	6	26	1019	30	71
2359	28/04/2006	0	39	64	5	23	650	27	59
559	29/04/2006	0	37	56	4	19	481	20	49
1159	29/04/2006	0	45	65	4	22	438	26	59
1759	29/04/2006	0	44	68	4	21	803	26	58
2359	29/04/2006	0	37	61	4	19	401	25	51
559	30/04/2006	0	40	53	2	17	284	22	48
1159	30/04/2006	0	41	58	3	19	235	25	48
1759	30/04/2006	0	47	71	5	22	262	36	60
2359	30/04/2006	0	38	56	3	20	196	39	50
559	01/05/2006	0	40	56	3	18	146	237	46
1159	01/05/2006	0	39	56	2	17	136	182	42
1759	01/05/2006	0	42	62	3	19	137	187	47
2359	01/05/2006	0	35	55	2	17	112	168	43
559	02/05/2006	0	9	58	3	17	102	171	46
1159	02/05/2006	0	4	54	3	18	97	152	43
1759	02/05/2006	0	5	53	4	18	94	178	44
2359	02/05/2006	0	4	36	3	19	91	170	47
559	03/05/2006	0	3	25	3	17	76	150	39



MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	03/05/2006	0	5	29	4	22	88	187	48
1759	03/05/2006	0	5	31	6	24	96	211	55
2359	03/05/2006	0	5	27	5	21	74	165	46
559	04/05/2006	0	4	26	4	22	71	157	47
1159	04/05/2006	0	5	26	4	22	70	190	51
1759	04/05/2006	0	7	39	7	32	97	267	66
2359	04/05/2006	0	6	31	5	26	71	200	53
559	05/05/2006	0	4	25	3	22	59	158	45
1159	05/05/2006	0	5	30	5	25	68	198	54
1759	05/05/2006	0	9	42	7	32	85	264	66
2359	05/05/2006	0	8	35	6	30	69	222	57
559	06/05/2006	0	7	31	4	23	59	171	48
1159	06/05/2006	0	10	35	5	26	58	212	58
1759	06/05/2006	0	13	43	7	31	74	231	67
2359	06/05/2006	0	13	37	5	26	54	188	55
559	07/05/2006	0	14	31	5	20	43	151	47
1159	07/05/2006	0	21	43	7	29	62	240	60
1759	07/05/2006	0	22	44	7	30	60	247	63
2359	07/05/2006	0	18	38	5	24	47	170	56
559	08/05/2006	0	18	35	4	21	35	136	46
1159	08/05/2006	0	34	57	9	34	61	250	75
1759	08/05/2006	0	21	42	6	23	41	163	52
2359	08/05/2006	0	4	43	5	20	37	158	50
559	09/05/2006	0	4	36	4	22	34	142	50
1159	09/05/2006	0	4	32	4	20	31	142	48
1759	09/05/2006	0	4	30	4	22	37	164	51
2359	09/05/2006	0	4	28	5	20	31	151	55
559	10/05/2006	0	4	27	5	23	34	148	50
1159	10/05/2006	0	5	29	5	23	35	163	53
1759	10/05/2006	0	6	33	6	28	41	183	58
2359	10/05/2006	0	4	27	4	24	31	154	51
559	11/05/2006	0	4	27	4	20	28	133	49
1159	11/05/2006	0	6	34	6	27	40	207	63
1759	11/05/2006	0	6	35	6	29	42	213	66
2359	11/05/2006	0	5	30	5	24	32	161	53
559	12/05/2006	0	6	28	4	22	26	140	45
1159	12/05/2006	0	10	36	6	25	34	181	60
1759	12/05/2006	0	13	39	6	27	37	191	60
2359	12/05/2006	0	13	31	4	22	26	142	53
559	13/05/2006	0	17	36	4	23	27	142	51
1159	13/05/2006	0	21	41	5	23	28	170	54
1759	13/05/2006	0	25	48	6	25	33	174	62
2359	13/05/2006	0	22	41	5	24	22	137	49
559	14/05/2006	0	23	41	5	22	23	133	47
1159	14/05/2006	0	26	45	4	23	25	142	50
1759	14/05/2006	0	25	44	5	21	23	134	53
2359	14/05/2006	0	25	48	5	22	23	132	53
559	15/05/2006	0	25	44	5	20	20	119	42
1159	15/05/2006	0	33	55	7	24	27	156	58
1759	15/05/2006	0	36	68	9	31	36	191	67
2359	15/05/2006	0	30	58	7	23	26	137	54
559	16/05/2006	0	29	50	6	19	20	110	43
1159	16/05/2006	0	42	64	9	27	27	156	56
1759	16/05/2006	0	39	76	10	30	33	172	65
2359	16/05/2006	0	37	63	10	26	27	154	57
559	17/05/2006	0	39	62	9	22	25	132	48
1159	17/05/2006	0	21	45	2	9	5	106	53
1759	17/05/2006	0	52	89	12	32	34	183	70
2359	17/05/2006	0	47	79	12	29	31	157	63
559	18/05/2006	0	38	63	9	21	19	114	45
1159	18/05/2006	0	52	76	12	25	26	147	56
1759	18/05/2006	0	57	95	14	31	38	172	68
2359	18/05/2006	0	49	79	13	28	28	143	57
559	19/05/2006	0	48	69	12	23	21	117	48
1159	19/05/2006	0	56	77	13	26	24	115	49
1759	19/05/2006	0	61	90	16	30	28	142	57
2359	19/05/2006	0	52	83	14	27	25	116	52
559	20/05/2006	0	51	74	13	23	17	105	40
1159	20/05/2006	0	64	89	15	27	24	113	51
1759	20/05/2006	0	62	90	17	29	23	117	51

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	20/05/2006	0	61	90	16	27	24	105	43
559	21/05/2006	0	63	85	15	28	24	103	43
1159	21/05/2006	0	64	85	16	27	21	104	42
1759	21/05/2006	0	62	93	17	28	24	116	50
2359	21/05/2006	0	58	100	19	32	26	121	50
559	22/05/2006	0	56	97	18	33	26	124	49
1159	22/05/2006	0	60	108	21	36	33	132	56
1759	22/05/2006	0	57	135	27	45	40	166	68
2359	22/05/2006	0	48	109	22	39	30	131	58
559	23/05/2006	0	46	90	20	34	29	114	48
1159	23/05/2006	0	54	95	20	35	29	117	47
1759	23/05/2006	0	52	115	25	41	34	135	52
2359	23/05/2006	0	53	104	23	39	32	115	53
559	24/05/2006	0	48	97	22	37	30	106	46
1159	24/05/2006	0	52	94	21	36	28	106	43
1759	24/05/2006	0	52	95	21	37	30	103	43
2359	24/05/2006	0	51	94	21	39	31	104	48
559	25/05/2006	0	50	98	21	38	29	109	43
1159	25/05/2006	0	49	94	21	41	30	106	43
1759	25/05/2006	0	52	100	24	42	34	112	50
2359	25/05/2006	0	49	97	23	43	33	110	45
559	26/05/2006	0	48	95	22	39	32	97	45
1159	26/05/2006	0	47	100	24	44	35	106	48
1759	26/05/2006	0	45	102	24	47	36	109	49
2359	26/05/2006	0	45	92	23	42	34	107	44
559	27/05/2006	0	39	81	21	38	29	87	39
1159	27/05/2006	0	56	107	26	53	40	118	52
1759	27/05/2006	0	50	119	30	56	49	126	58
2359	27/05/2006	0	47	102	26	52	43	114	46
559	28/05/2006	0	44	85	22	46	35	95	42
1159	28/05/2006	0	57	109	28	54	44	118	53
1759	28/05/2006	0	62	127	34	67	57	141	60
2359	28/05/2006	0	52	108	28	57	45	114	50
559	29/05/2006	0	51	96	26	54	42	100	46
1159	29/05/2006	0	69	128	31	66	56	129	59
1759	29/05/2006	0	60	126	34	66	58	138	54
2359	29/05/2006	0	54	110	31	61	51	111	51
559	30/05/2006	0	57	99	27	58	45	96	44
1159	30/05/2006	0	67	113	32	63	49	103	48
1759	30/05/2006	0	70	121	33	68	59	118	55
2359	30/05/2006	0	62	113	32	69	58	111	46
559	31/05/2006	0	60	102	27	58	49	88	42
1159	31/05/2006	0	82	138	36	74	69	115	54
1759	31/05/2006	0	72	157	43	81	75	139	57
2359	31/05/2006	0	69	133	37	78	72	126	52
559	01/06/2006	0	63	117	33	67	60	98	48
1159	01/06/2006	0	92	159	43	88	78	128	56
1759	01/06/2006	0	151	176	162	77	92	55	61
2359	01/06/2006	0	129	122	128	67	77	47	51
559	02/06/2006	0	118	103	106	57	62	38	41
1159	02/06/2006	0	172	168	154	77	90	51	58
1759	02/06/2006	0	165	190	184	86	102	53	63
2359	02/06/2006	0	141	152	146	80	90	48	54
559	03/06/2006	0	141	131	132	67	73	44	48
1159	03/06/2006	0	165	152	154	77	92	46	56
1759	03/06/2006	0	147	141	132	70	83	43	45
2359	03/06/2006	0	144	125	132	70	79	40	42
559	04/06/2006	0	157	125	125	70	75	36	39
1159	04/06/2006	0	193	172	162	85	88	44	51
1759	04/06/2006	0	180	200	204	95	102	46	54
2359	04/06/2006	0	151	156	158	85	95	40	43
559	05/06/2006	0	157	135	135	77	83	37	35
1159	05/06/2006	0	211	205	194	101	107	46	51
1759	05/06/2006	0	211	246	245	120	131	51	61
2359	05/06/2006	0	157	172	166	95	100	38	39
559	06/06/2006	0	147	135	139	75	83	33	33
1159	06/06/2006	0	193	176	175	97	100	39	43
1759	06/06/2006	0	202	185	194	106	104	38	42
2359	06/06/2006	0	184	172	175	101	107	37	38
559	07/06/2006	0	172	152	150	86	95	34	35

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
1159	07/06/2006	0	211	195	189	108	113	36	42
1759	07/06/2006	0	193	227	233	131	131	41	48
2359	07/06/2006	0	188	216	215	128	128	39	43
559	08/06/2006	0	202	185	189	115	119	37	39
1159	08/06/2006	0	255	253	245	142	148	43	49
1759	08/06/2006	0	237	290	287	169	171	48	56
2359	08/06/2006	0	206	233	258	155	144	38	43
559	09/06/2006	0	226	216	227	142	144	37	43
1159	09/06/2006	0	226	227	227	139	148	37	43
1759	09/06/2006	0	206	221	215	137	144	36	39
2359	09/06/2006	0	221	216	221	139	144	36	42
559	10/06/2006	0	226	210	204	131	144	36	39
1159	10/06/2006	0	267	233	233	145	159	37	42
1759	10/06/2006	0	267	260	252	165	176	39	48
2359	10/06/2006	0	237	233	239	158	163	36	39
559	11/06/2006	0	237	227	215	145	155	36	41
1159	11/06/2006	0	249	240	227	152	163	35	38
1759	11/06/2006	0	267	274	252	180	185	40	48
2359	11/06/2006	0	237	253	252	165	185	36	39
559	12/06/2006	0	255	233	245	162	185	36	39
1159	12/06/2006	0	302	315	295	206	214	42	49
1759	12/06/2006	0	302	413	425	277	284	46	54
2359	12/06/2006	0	243	282	329	225	237	39	45
559	13/06/2006	0	255	246	258	201	204	34	37
1159	13/06/2006	0	335	376	401	290	300	43	51
1759	13/06/2006	0	344	519	510	372	395	48	63
2359	13/06/2006	0	281	365	401	297	325	42	49
559	14/06/2006	0	288	325	348	252	270	38	42
1159	14/06/2006	0	393	502	479	363	406	44	56
1759	14/06/2006	0	393	785	817	551	585	51	63
2359	14/06/2006	0	326	538	579	414	471	46	51
559	15/06/2006	0	318	354	390	328	353	34	41
1159	15/06/2006	0	542	696	639	519	532	45	54
1759	15/06/2006	0	509	1022	951	739	798	50	59
2359	15/06/2006	0	415	577	683	551	605	44	53
559	16/06/2006	0	427	454	543	437	457	36	45
1159	16/06/2006	0	683	892	880	739	717	46	54
1759	16/06/2006	0	637	932	1031	961	966	49	59
2359	16/06/2006	0	494	670	787	628	646	42	49
559	17/06/2006	0	509	577	683	551	567	34	43
1159	17/06/2006	0	963	1022	1031	888	966	45	58
1759	17/06/2006	0	963	1551	1542	1439	1362	48	59
2359	17/06/2006	0	58	696	6	11	13	36	45
559	18/06/2006	0	86	577	5	11	10	34	43
1159	18/06/2006	0	118	670	7	11	13	39	51
1759	18/06/2006	0	129	854	8	16	17	45	59
2359	18/06/2006	0	123	502	5	14	13	36	48
559	19/06/2006	0	141	426	5	13	12	35	42
1159	19/06/2006	0	147	440	3	17	10	34	41
1759	19/06/2006	0	157	426	3	17	14	35	46
2359	19/06/2006	0	165	365	5	17	21	36	46
559	20/06/2006	0	154	274	1	16	18	30	35
1159	20/06/2006	0	197	315	2	19	24	34	43
1759	20/06/2006	0	232	454	14	33	43	45	65
2359	20/06/2006	0	184	282	5	29	35	34	43
559	21/06/2006	0	197	253	4	29	33	32	41
1159	21/06/2006	0	216	260	3	31	36	32	41
1759	21/06/2006	0	226	290	5	37	38	35	46
2359	21/06/2006	0	226	260	6	37	41	33	42
559	22/06/2006	0	216	210	7	33	37	29	34
1159	22/06/2006	0	302	325	20	47	53	37	48
1759	22/06/2006	0	267	354	30	57	68	41	56
2359	22/06/2006	0	211	246	28	53	59	35	45
559	23/06/2006	0	216	205	24	48	53	30	37
1159	23/06/2006	0	310	315	38	63	70	39	51
1759	23/06/2006	0	243	307	43	67	75	37	49
2359	23/06/2006	0	221	233	43	63	71	33	38
559	24/06/2006	0	221	185	38	57	64	28	35
1159	24/06/2006	0	310	290	54	75	88	37	49
1759	24/06/2006	0	295	334	72	97	107	43	56

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
2359	24/06/2006	0	243	246	60	78	86	35	45
559	25/06/2006	0	221	216	53	73	83	32	41
1159	25/06/2006	0	318	290	74	93	104	36	53
1759	25/06/2006	0	243	315	78	106	116	38	51
2359	25/06/2006	0	237	253	74	93	107	36	46
559	26/06/2006	0	216	195	65	80	90	29	39
1159	26/06/2006	0	335	282	83	104	119	36	51
1759	26/06/2006	0	281	344	104	123	152	42	58
2359	26/06/2006	0	237	253	85	110	125	35	48
559	27/06/2006	0	243	216	81	97	116	32	39
1159	27/06/2006	0	344	315	98	125	155	40	53
1759	27/06/2006	0	310	413	135	158	180	44	65
2359	27/06/2006	0	261	290	115	139	167	37	56
559	28/06/2006	0	237	205	88	113	134	28	41
1159	28/06/2006	0	335	274	104	139	163	36	51
1759	28/06/2006	0	326	334	139	162	199	42	61
2359	28/06/2006	0	255	246	109	142	171	31	51
559	29/06/2006	0	261	216	98	120	148	30	41
1159	29/06/2006	0	372	253	112	142	163	29	48
1759	29/06/2006	0	310	274	132	162	189	35	53
2359	29/06/2006	0	267	233	112	137	159	31	39
559	30/06/2006	0	295	205	101	125	144	27	38
1159	30/06/2006	0	415	290	122	162	199	33	46
1759	30/06/2006	0	372	344	162	188	231	37	56
2359	30/06/2006	0	335	274	139	158	199	32	46
559	01/07/2006	0	344	233	118	152	176	28	37
1159	01/07/2006	0	404	282	132	152	185	28	41
1759	01/07/2006	0	439	354	166	192	243	34	51
2359	01/07/2006	0	344	290	150	169	204	30	43
559	02/07/2006	0	353	233	122	145	176	26	35
1159	02/07/2006	0	509	354	166	184	220	32	48
1759	02/07/2006	0	382	376	175	215	270	33	48
2359	02/07/2006	0	353	307	166	206	237	30	43
559	03/07/2006	0	353	233	135	158	194	24	33
1159	03/07/2006	0	617	388	194	220	277	33	49
1759	03/07/2006	0	509	538	245	283	363	37	58
2359	03/07/2006	0	393	354	204	235	277	32	45
559	04/07/2006	0	439	325	184	201	256	30	41
1159	04/07/2006	0	596	454	227	246	316	35	51
05:35	05/07/2006	0	467	347	200	235	284	30	38
11:35	05/07/2006	0	598	403	213	249	326	30	46
17:35	05/07/2006	0	526	478	265	315	389	34	55
23:35	05/07/2006	0	454	366	214	238	304	29	43
05:35	06/07/2006	0	516	342	206	218	283	28	43
11:35	06/07/2006	0	671	428	269	262	337	32	46
17:35	06/07/2006	0	533	470	275	279	352	31	45
23:35	06/07/2006	0	583	443	258	269	349	31	45
05:35	07/07/2006	0	596	398	245	236	319	29	43
11:35	07/07/2006	0	681	435	246	249	348	30	43
17:35	07/07/2006	0	637	421	236	243	330	29	37
23:35	07/07/2006	0	664	403	254	235	301	27	41
05:35	08/07/2006	0	741	422	237	231	302	28	39
11:35	08/07/2006	0	874	482	269	243	318	27	41
17:35	08/07/2006	0	840	560	292	281	364	29	44
23:35	08/07/2006	0	715	496	289	257	340	29	41
05:35	09/07/2006	0	749	478	269	258	333	27	39
11:35	09/07/2006	0	1038	616	324	282	363	31	47
17:35	09/07/2006	0	679	682	340	300	403	30	47
23:35	09/07/2006	0	643	499	305	292	382	29	40
05:35	10/07/2006	0	709	477	279	261	348	27	38
11:35	10/07/2006	0	1000	662	349	317	419	31	47
17:35	10/07/2006	0	776	576	332	301	419	29	44
23:35	10/07/2006	0	779	492	309	279	366	29	41
05:35	11/07/2006	0	870	486	13	255	348	26	39
11:35	11/07/2006	0	971	508	2	234	322	27	36
17:35	11/07/2006	0	948	537	3	206	306	28	40
23:35	11/07/2006	0	873	460	2	161	254	27	36
05:35	12/07/2006	0	784	397	1	124	192	24	32
11:35	12/07/2006	0	877	500	1	122	202	28	38
17:35	12/07/2006	0	719	548	5	124	188	30	42

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
23:35	12/07/2006	0	509	441	2	104	150	28	38
05:35	13/07/2006	0	363	321	1	89	114	26	33
11:35	13/07/2006	0	362	455	4	97	128	31	41
17:35	13/07/2006	0	248	376	6	87	113	30	43
23:35	13/07/2006	0	174	298	3	75	89	28	35
05:35	14/07/2006	0	134	250	0	64	73	26	30
11:35	14/07/2006	0	151	297	2	72	76	28	40
17:35	14/07/2006	0	113	287	4	71	73	28	38
23:35	14/07/2006	0	90	215	2	64	64	27	35
05:35	15/07/2006	0	81	211	3	57	62	26	32
11:35	15/07/2006	0	94	256	4	64	64	31	35
17:35	15/07/2006	0	83	275	7	72	71	33	43
23:35	15/07/2006	0	68	191	3	54	56	27	33
05:35	16/07/2006	0	67	173	3	52	48	25	29
11:35	16/07/2006	0	66	198	3	54	54	26	34
17:35	16/07/2006	0	70	240	7	62	62	32	38
23:35	16/07/2006	0	58	179	6	55	51	28	32
05:35	17/07/2006	0	54	156	4	50	46	25	30
11:35	17/07/2006	0	66	210	8	58	57	31	38
17:35	17/07/2006	0	56	203	10	62	56	31	36
23:35	17/07/2006	0	54	167	9	56	54	30	33
05:35	18/07/2006	0	54	141	7	51	47	26	31
11:35	18/07/2006	0	62	177	11	55	55	30	37
17:35	18/07/2006	0	51	139	7	51	46	26	30
23:35	18/07/2006	0	54	137	10	51	47	27	31
05:35	19/07/2006	0	55	117	9	45	44	25	26
11:35	19/07/2006	0	63	153	11	54	52	29	36
17:35	19/07/2006	0	63	176	19	61	61	33	38
23:35	19/07/2006	0	58	135	17	55	56	30	34
05:35	20/07/2006	0	53	112	10	47	44	25	27
11:35	20/07/2006	0	71	149	19	60	61	32	39
17:35	20/07/2006	0	68	161	25	65	66	36	41
23:35	20/07/2006	0	58	120	22	56	50	30	32
05:35	21/07/2006	0	55	103	15	50	45	26	28
11:35	21/07/2006	0	73	143	23	61	60	32	40
17:35	21/07/2006	0	71	149	29	67	70	35	41
23:35	21/07/2006	0	60	105	25	57	53	28	32
05:35	22/07/2006	0	60	98	20	51	48	27	27
11:35	22/07/2006	0	78	133	27	61	61	32	38
17:35	22/07/2006	0	80	144	40	73	73	38	46
23:35	22/07/2006	0	65	103	30	60	57	29	34
05:35	23/07/2006	0	62	86	25	50	50	25	29
11:35	23/07/2006	0	69	94	27	52	52	27	30
17:35	23/07/2006	0	79	131	44	70	72	35	44
23:35	23/07/2006	0	77	111	38	61	60	28	35
05:35	24/07/2006	0	71	97	29	53	52	26	27
11:35	24/07/2006	0	73	91	29	51	51	26	29
17:35	24/07/2006	0	86	122	43	66	67	32	39
23:35	24/07/2006	0	75	101	38	57	57	29	32
05:35	25/07/2006	0	75	91	30	52	51	26	28
11:35	25/07/2006	0	93	117	41	64	61	29	39
17:35	25/07/2006	0	82	109	42	58	56	27	34
23:35	25/07/2006	0	76	90	35	52	49	25	30
05:35	26/07/2006	0	79	89	32	47	48	25	25
11:35	26/07/2006	0	81	89	32	50	50	24	27
17:35	26/07/2006	0	85	96	36	49	47	26	29
23:35	26/07/2006	0	82	92	35	49	46	24	27
05:35	27/07/2006	0	88	94	33	45	46	24	26
11:35	27/07/2006	0	95	105	37	51	50	26	27
17:35	27/07/2006	0	87	111	45	52	53	27	30
23:35	27/07/2006	0	82	92	38	51	51	25	29
05:35	28/07/2006	0	78	89	32	47	47	23	24
11:35	28/07/2006	0	88	110	41	54	52	27	28
17:35	28/07/2006	0	93	122	51	59	61	29	33
23:35	28/07/2006	0	82	103	46	54	55	28	30
05:35	29/07/2006	0	83	93	39	55	51	24	27
11:35	29/07/2006	0	86	94	39	53	50	25	27
17:35	29/07/2006	0	91	107	49	54	57	27	30
23:35	29/07/2006	0	84	107	46	54	53	26	28
05:35	30/07/2006	0	84	94	37	49	48	23	25

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
11:35	30/07/2006	0	86	95	40	50	50	24	25
17:35	30/07/2006	0	86	100	38	50	49	23	24
23:35	30/07/2006	0	92	99	43	48	48	24	26
05:35	31/07/2006	0	83	92	39	47	46	23	24
11:35	31/07/2006	0	91	111	45	50	52	25	27
17:35	31/07/2006	0	80	101	42	50	49	24	25
23:35	31/07/2006	0	77	98	41	50	52	25	25
05:35	01/08/2006	0	59	89	36	45	44	22	22
11:35	01/08/2006	0	49	107	46	51	52	26	27
17:35	01/08/2006	0	41	113	50	56	53	25	28
23:35	01/08/2006	0	30	99	45	51	52	25	27
05:35	02/08/2006	0	24	83	34	43	43	20	19
11:35	02/08/2006	0	27	95	42	51	51	25	24
17:35	02/08/2006	0	24	101	47	54	55	27	27
23:35	02/08/2006	0	24	94	45	52	50	26	26
05:35	03/08/2006	0	25	83	36	53	48	23	26
11:35	03/08/2006	0	29	92	43	53	55	27	28
17:35	03/08/2006	0	24	93	47	56	58	26	26
23:35	03/08/2006	0	25	82	39	51	52	25	25
05:35	04/08/2006	0	24	80	38	51	50	24	25
11:35	04/08/2006	0	26	88	40	52	55	27	28
17:35	04/08/2006	0	23	79	37	55	51	26	30
23:35	04/08/2006	0	19	68	37	49	51	23	24
05:35	05/08/2006	0	20	66	33	47	49	23	23
11:35	05/08/2006	0	22	78	38	52	52	27	27
17:35	05/08/2006	0	21	72	37	50	52	26	28
23:35	05/08/2006	0	23	69	36	52	54	27	27
05:35	06/08/2006	0	22	60	30	46	47	24	24
11:35	06/08/2006	0	29	76	35	55	55	26	28
17:35	06/08/2006	0	30	78	42	60	58	30	31
23:35	06/08/2006	0	27	64	36	53	53	28	30
05:35	07/08/2006	0	26	56	35	52	51	25	27
11:35	07/08/2006	0	31	68	40	56	59	29	32
17:35	07/08/2006	0	34	77	44	60	64	33	35
23:35	07/08/2006	0	29	56	35	53	60	28	28
05:35	08/08/2006	0	29	51	32	49	50	26	27
11:35	08/08/2006	0	29	55	31	49	52	26	26
17:35	08/08/2006	0	32	60	37	56	59	29	32
23:35	08/08/2006	0	29	56	34	51	56	28	30
05:35	09/08/2006	0	31	52	33	49	53	27	28
11:35	09/08/2006	0	32	54	31	52	58	29	31
17:35	09/08/2006	0	28	54	33	50	55	28	28
23:35	09/08/2006	0	29	51	35	49	58	28	28
05:35	10/08/2006	0	28	46	27	41	46	24	24
11:35	10/08/2006	0	36	57	29	44	54	29	31
17:35	10/08/2006	0	38	61	40	56	65	33	38
23:35	10/08/2006	0	35	48	28	46	49	26	28
05:35	11/08/2006	0	31	42	25	40	44	24	23
11:35	11/08/2006	0	36	48	30	44	48	26	27
17:35	11/08/2006	0	41	56	31	46	52	28	32
23:35	11/08/2006	0	37	48	29	45	51	26	27
05:35	12/08/2006	0	38	46	29	45	48	24	26
11:35	12/08/2006	0	44	55	30	44	52	27	29
17:35	12/08/2006	0	41	50	30	44	49	26	28
23:35	12/08/2006	0	40	47	29	45	49	25	27
05:35	13/08/2006	0	39	42	26	40	42	23	26
11:35	13/08/2006	0	49	54	30	45	47	27	29
17:35	13/08/2006	0	56	67	46	60	69	35	41
23:35	13/08/2006	0	44	47	31	44	52	27	28
05:35	14/08/2006	0	43	43	29	41	46	24	26
11:35	14/08/2006	0	58	57	33	48	53	30	34
17:35	14/08/2006	0	55	60	37	50	58	31	36
23:35	14/08/2006	0	50	51	33	47	52	27	29
05:35	15/08/2006	0	49	45	29	42	49	26	29
11:35	15/08/2006	0	58	56	35	49	57	29	30
17:35	15/08/2006	0	48	47	23	40	46	25	26
23:35	15/08/2006	0	40	49	6	40	43	26	24
05:35	16/08/2006	0	28	44	2	38	33	24	25
11:35	16/08/2006	0	26	55	6	43	33	29	31
17:35	16/08/2006	0	21	50	6	38	22	27	31

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
23:35	16/08/2006	0	14	43	2	30	17	24	25
05:35	17/08/2006	0	13	37	2	26	14	23	25
11:35	17/08/2006	0	14	42	3	27	12	26	26
17:35	17/08/2006	0	14	43	3	26	15	28	30
23:35	17/08/2006	0	14	38	3	23	14	27	27
05:35	18/08/2006	0	13	32	3	20	12	25	26
11:35	18/08/2006	0	16	35	3	20	12	28	29
17:35	18/08/2006	0	20	41	8	23	17	32	35
23:35	18/08/2006	0	16	30	3	16	12	26	26
05:35	19/08/2006	0	14	26	2	14	11	24	23
11:35	19/08/2006	0	19	31	6	15	13	28	30
17:35	19/08/2006	0	19	33	5	16	15	29	30
23:35	19/08/2006	0	17	28	3	14	12	25	23
05:35	20/08/2006	0	17	25	2	14	11	24	24
11:35	20/08/2006	0	19	29	3	14	12	25	23
17:35	20/08/2006	0	22	33	6	17	15	28	30
23:35	20/08/2006	0	21	28	2	14	13	25	26
05:35	21/08/2006	0	19	25	2	12	11	22	23
11:35	21/08/2006	0	25	30	4	15	14	27	29
17:35	21/08/2006	0	27	34	6	17	17	30	30
23:35	21/08/2006	0	24	30	5	16	14	27	29
05:35	22/08/2006	0	25	28	3	14	13	26	24
11:35	22/08/2006	0	31	31	5	15	14	27	29
17:35	22/08/2006	0	35	42	10	20	21	34	37
23:35	22/08/2006	0	31	32	3	13	13	25	28
05:35	23/08/2006	0	33	29	3	15	13	25	25
11:35	23/08/2006	0	31	29	4	13	13	25	23
17:35	23/08/2006	0	35	31	4	14	14	25	23
23:35	23/08/2006	0	33	29	2	14	14	24	23
05:35	24/08/2006	0	33	28	3	13	12	23	22
11:35	24/08/2006	0	41	35	6	15	16	25	25
17:35	24/08/2006	0	44	39	10	19	18	29	29
23:35	24/08/2006	0	39	34	6	15	16	26	25
05:35	25/08/2006	0	36	30	4	13	14	24	23
11:35	25/08/2006	0	43	35	5	16	15	26	25
17:35	25/08/2006	0	48	41	8	18	18	28	28
23:35	25/08/2006	0	42	35	5	17	15	25	24
05:35	26/08/2006	0	42	33	3	15	14	25	22
11:35	26/08/2006	0	48	36	6	15	16	26	23
17:35	26/08/2006	0	54	42	10	19	20	29	29
23:35	26/08/2006	0	47	35	5	16	15	25	23
05:35	27/08/2006	0	43	31	3	13	13	22	21
11:35	27/08/2006	0	54	38	6	16	15	25	23
17:35	27/08/2006	0	53	41	8	18	19	29	28
23:35	27/08/2006	0	50	36	6	16	15	25	23
05:35	28/08/2006	0	52	38	7	15	15	24	23
11:35	28/08/2006	0	61	41	6	16	17	26	24
17:35	28/08/2006	0	65	51	12	21	20	32	31
23:35	28/08/2006	0	59	44	9	18	18	28	24
05:35	29/08/2006	0	55	41	6	16	17	26	24
11:35	29/08/2006	0	56	38	4	15	14	23	20
17:35	29/08/2006	0	59	42	9	19	19	25	26
23:35	29/08/2006	0	58	42	8	16	16	24	24
05:35	30/08/2006	0	57	38	7	15	15	24	21
11:35	30/08/2006	0	58	39	5	14	15	23	22
17:35	30/08/2006	0	62	40	6	15	16	24	21
23:35	30/08/2006	0	60	42	7	16	16	23	20
05:35	31/08/2006	0	58	40	5	15	15	23	20
11:35	31/08/2006	0	62	43	5	15	15	23	20
17:35	31/08/2006	0	61	50	10	17	19	26	24
23:35	31/08/2006	0	55	41	9	16	16	22	20
05:35	01/09/2006	0	56	39	8	13	14	22	18
11:35	01/09/2006	0	61	44	8	16	17	23	21
17:35	01/09/2006	0	69	53	14	20	23	27	26
23:35	01/09/2006	0	58	46	10	17	18	25	23
05:35	02/09/2006	0	57	45	10	17	16	24	21
11:35	02/09/2006	0	67	50	12	18	19	26	23
17:35	02/09/2006	0	74	65	21	24	24	34	30
23:35	02/09/2006	0	59	48	15	20	19	27	26
05:35	03/09/2006	0	55	42	12	18	18	24	22

MLSB Coke Deep Cover Soil Suction (kPa)

		Sensor Depth (cm)							
Time	Date	5 (Damaged)	20	30	45	70	90	100	180
11:35	03/09/2006	0	67	56	15	20	19	28	26
17:35	03/09/2006	0	76	63	21	26	27	33	31
23:35	03/09/2006	0	61	48	16	22	23	27	26
05:35	04/09/2006	0	57	42	13	17	18	23	21
11:35	04/09/2006	0	66	54	15	20	19	27	24
17:35	04/09/2006	0	77	64	24	26	26	34	35
23:35	04/09/2006	0	60	46	15	21	22	26	24
05:35	05/09/2006	0	62	45	15	18	18	25	23
11:35	05/09/2006	0	65	47	15	18	19	27	20
17:35	05/09/2006	0	77	59	22	23	25	32	31
23:35	05/09/2006	0	64	49	18	20	22	27	24
05:35	06/09/2006	0	63	45	16	18	20	23	21
11:35	06/09/2006	0	70	51	16	20	21	26	24
17:35	06/09/2006	0	79	58	22	23	27	29	32
23:35	06/09/2006	0	67	51	20	20	21	25	24
05:35	07/09/2006	0	65	46	17	18	17	24	21
11:35	07/09/2006	0	68	47	14	19	18	23	22
17:35	07/09/2006	0	77	54	20	20	21	25	25
23:35	07/09/2006	0	70	48	17	19	21	25	23
05:35	08/09/2006	0	67	46	16	19	19	23	22
11:35	08/09/2006	0	74	52	19	20	20	24	22
17:35	08/09/2006	0	87	64	26	25	24	28	27
23:35	08/09/2006	0	75	52	22	22	22	25	23
05:35	09/09/2006	0	72	53	22	20	19	24	21
11:35	09/09/2006	0	79	54	19	20	21	26	21
17:35	09/09/2006	0	88	70	31	27	26	29	31
23:35	09/09/2006	0	82	60	26	24	25	26	24
05:35	10/09/2006	0	75	52	21	21	20	23	21
11:35	10/09/2006	0	77	55	24	21	21	24	22
17:35	10/09/2006	0	79	61	27	23	25	25	26
23:35	10/09/2006	0	80	52	25	21	22	26	22
05:35	11/09/2006	0	84	55	24	20	23	25	23
11:35	11/09/2006	0	88	55	27	22	24	26	22
17:35	11/09/2006	0	94	68	33	25	29	28	26
23:35	11/09/2006	0	82	55	25	21	21	24	21
05:35	12/09/2006	0	81	51	24	19	20	23	18
11:35	12/09/2006	0	96	58	32	23	23	27	22
17:35	12/09/2006	0	100	70	33	24	26	26	27
23:35	12/09/2006	0	86	58	28	22	21	24	22
05:35	13/09/2006	0	81	53	25	20	20	22	18
11:35	13/09/2006	0	100	62	29	22	23	25	21
17:35	13/09/2006	0	100	68	34	25	25	26	25
23:35	13/09/2006	0	87	57	29	23	23	23	19
05:35	14/09/2006	0	86	55	28	23	23	22	19
11:35	14/09/2006	0	89	55	27	23	22	22	19
17:35	14/09/2006	0	94	62	30	23	22	24	22
23:35	14/09/2006	0	90	57	29	22	22	21	19
05:35	15/09/2006	0	93	56	31	24	22	22	19
11:35	15/09/2006	0	98	62	33	23	20	23	19
17:35	15/09/2006	0	104	70	37	25	26	26	22
23:35	15/09/2006	0	96	63	34	23	23	23	20
05:35	16/09/2006	0	95	60	31	24	22	22	18
11:35	16/09/2006	0	90	60	27	21	21	21	17
17:35	16/09/2006	0	98	67	37	26	25	23	22
23:35	16/09/2006	0	93	64	35	23	21	22	18
05:35	17/09/2006	0	96	59	34	24	23	24	18
11:35	17/09/2006	0	97	65	35	22	23	22	18
17:35	17/09/2006	0	98	70	40	25	24	24	19
23:35	17/09/2006	0	95	66	40	25	23	25	20
05:35	18/09/2006	0	91	66	38	33	25	24	19
11:35	18/09/2006	0	89	65	38	25	25	22	17
17:35	18/09/2006	0	99	76	48	30	29	26	25
23:35	18/09/2006	0	88	68	40	28	25	24	20
05:35	19/09/2006	0	78	60	37	24	24	23	17
11:35	19/09/2006	0	83	68	38	25	26	24	21
17:35	19/09/2006	0	85	78	46	30	29	26	23
23:35	19/09/2006	0	78	69	40	29	28	25	20
05:35	20/09/2006	0	72	65	39	27	26	24	18
11:35	20/09/2006	0	74	71	43	27	28	26	21
17:35	20/09/2006	0	71	70	41	30	29	27	22



MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 (Damaged)	20	30	45	70	90	100	180
23:35	20/09/2006	0	65	66	42	30	30	26	22
05:35	21/09/2006	0	64	64	39	28	28	25	20
11:35	21/09/2006	0	62	64	39	26	28	24	21
17:35	21/09/2006	0	56	64	37	28	28	26	20
23:35	21/09/2006	0	58	64	43	31	31	27	23
05:35	22/09/2006	0	54	60	39	28	29	25	21
11:35	22/09/2006	0	54	61	38	28	27	27	19
17:35	22/09/2006	0	61	71	44	35	36	31	25
23:35	22/09/2006	0	49	59	39	30	29	25	21
05:35	23/09/2006	0	48	50	35	28	25	24	20
11:35	23/09/2006	0	53	58	39	30	27	28	22
17:35	23/09/2006	0	56	65	45	32	34	30	25
23:35	23/09/2006	0	43	50	34	27	27	25	19
05:35	24/09/2006	0	46	50	38	27	28	26	21
11:35	24/09/2006	0	48	58	37	32	28	28	23
17:35	24/09/2006	0	55	63	48	36	36	31	26
23:35	24/09/2006	0	48	53	37	33	30	27	22
05:35	25/09/2006	0	47	50	35	32	28	26	21
11:35	25/09/2006	0	48	50	34	27	28	26	20
17:35	25/09/2006	0	49	51	38	30	32	29	25
23:35	25/09/2006	0	46	48	38	30	31	28	21
05:35	26/09/2006	0	48	46	33	29	27	27	22
11:35	26/09/2006	0	45	43	33	27	29	27	22
17:35	26/09/2006	0	48	48	37	30	29	27	21
23:35	26/09/2006	0	43	43	30	27	26	26	20
05:35	27/09/2006	0	42	39	27	24	25	24	18
11:35	27/09/2006	0	45	43	30	26	26	25	20
17:35	27/09/2006	0	46	50	37	30	32	29	22
23:35	27/09/2006	0	42	46	33	27	29	27	21
05:35	28/09/2006	0	44	45	33	28	29	27	21
11:35	28/09/2006	0	42	46	36	30	29	27	23
17:35	28/09/2006	0	36	50	39	31	33	30	24
23:35	28/09/2006	0	34	47	38	31	33	29	22
05:35	29/09/2006	0	29	41	30	27	28	27	21
11:35	29/09/2006	0	29	44	34	29	28	27	20
17:35	29/09/2006	0	29	46	37	32	32	31	24
23:35	29/09/2006	0	25	40	36	28	28	28	22
05:35	30/09/2006	0	25	40	33	29	29	27	21
11:35	30/09/2006	0	23	38	31	28	28	28	20
17:35	30/09/2006	0	28	44	39	33	34	30	26
23:35	30/09/2006	0	22	34	29	26	27	26	21
05:35	01/10/2006	0	21	35	30	26	28	25	21
11:35	01/10/2006	0	19	36	31	27	29	28	22
17:35	01/10/2006	0	17	37	34	29	29	29	23
23:35	01/10/2006	0	17	33	30	26	29	26	20
05:35	02/10/2006	0	16	31	28	28	26	26	20
11:35	02/10/2006	0	14	31	27	26	27	26	19
17:35	02/10/2006	0	19	34	33	30	32	29	23
23:35	02/10/2006	0	15	29	27	25	27	27	20
05:35	03/10/2006	0	14	28	25	26	26	26	20
11:35	03/10/2006	0	14	28	27	25	26	26	19
17:35	03/10/2006	0	20	35	34	29	32	33	24
23:35	03/10/2006	0	18	32	32	28	31	29	22
05:35	04/10/2006	0	15	28	28	27	28	26	19
11:35	04/10/2006	0	17	30	27	29	29	28	22
17:35	04/10/2006	0	22	38	37	36	34	34	26
23:35	04/10/2006	0	18	30	29	45	31	28	22
05:35	05/10/2006	0	17	30	30	28	31	30	23
11:35	05/10/2006	0	18	28	26	24	26	29	23

## **Shallow Cover - Water Content Data**

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
05:35	01/05/2005	0.28	0.3	0.161	0.19	0.215	0.22	0.25	0.274
11:35	01/05/2005	0.278	0.298	0.16	0.19	0.214	0.219	0.249	0.273
17:35	01/05/2005	0.279	0.298	0.16	0.19	0.215	0.219	0.249	0.274
23:35	01/05/2005	0.283	0.301	0.16	0.19	0.215	0.219	0.249	0.275
05:35	02/05/2005	0.283	0.302	0.16	0.19	0.215	0.219	0.249	0.275
11:35	02/05/2005	0.28	0.299	0.16	0.189	0.214	0.219	0.247	0.273
17:35	02/05/2005	0.273	0.298	0.16	0.19	0.215	0.219	0.248	0.274
23:35	02/05/2005	0.279	0.299	0.161	0.19	0.215	0.219	0.249	0.275
05:35	03/05/2005	0.282	0.3	0.16	0.19	0.214	0.218	0.247	0.273
11:35	03/05/2005	0.281	0.3	0.16	0.189	0.214	0.218	0.247	0.273
17:35	03/05/2005	0.27	0.297	0.161	0.19	0.215	0.219	0.248	0.275
23:35	03/05/2005	0.275	0.296	0.161	0.19	0.215	0.219	0.247	0.274
05:35	04/05/2005	0.28	0.298	0.161	0.189	0.214	0.219	0.246	0.273
11:35	04/05/2005	0.276	0.298	0.16	0.189	0.214	0.22	0.245	0.272
17:35	04/05/2005	0.267	0.294	0.161	0.19	0.215	0.221	0.247	0.273
23:35	04/05/2005	0.273	0.294	0.162	0.19	0.215	0.222	0.247	0.274
05:35	05/05/2005	0.278	0.296	0.162	0.189	0.214	0.222	0.246	0.272
11:35	05/05/2005	0.273	0.296	0.161	0.189	0.214	0.222	0.245	0.272
17:35	05/05/2005	0.27	0.294	0.162	0.19	0.215	0.224	0.246	0.273
23:35	05/05/2005	0.282	0.298	0.162	0.189	0.214	0.224	0.245	0.272
05:35	06/05/2005	0.286	0.303	0.162	0.19	0.214	0.225	0.245	0.272
11:35	06/05/2005	0.284	0.304	0.161	0.189	0.214	0.225	0.244	0.271
17:35	06/05/2005	0.277	0.301	0.162	0.189	0.214	0.226	0.245	0.272
23:35	06/05/2005	0.282	0.302	0.163	0.189	0.214	0.226	0.245	0.272
05:35	07/05/2005	0.286	0.302	0.161	0.188	0.213	0.225	0.244	0.269
11:35	07/05/2005	0.281	0.303	0.161	0.188	0.213	0.226	0.244	0.27
17:35	07/05/2005	0.27	0.298	0.163	0.189	0.214	0.226	0.245	0.272
23:35	07/05/2005	0.277	0.298	0.163	0.19	0.214	0.226	0.245	0.271
05:35	08/05/2005	0.283	0.3	0.162	0.189	0.214	0.226	0.245	0.27
11:35	08/05/2005	0.277	0.3	0.162	0.189	0.214	0.226	0.244	0.27
17:35	08/05/2005	0.268	0.296	0.163	0.19	0.215	0.226	0.246	0.271
23:35	08/05/2005	0.274	0.295	0.163	0.189	0.214	0.225	0.245	0.27
05:35	09/05/2005	0.278	0.297	0.163	0.189	0.214	0.225	0.245	0.27
11:35	09/05/2005	0.277	0.295	0.161	0.188	0.212	0.223	0.243	0.267
17:35	09/05/2005	0.272	0.295	0.162	0.189	0.213	0.224	0.245	0.27
23:35	09/05/2005	0.278	0.296	0.162	0.189	0.213	0.224	0.245	0.27
05:35	10/05/2005	0.281	0.297	0.162	0.188	0.213	0.223	0.244	0.268
11:35	10/05/2005	0.281	0.297	0.161	0.188	0.213	0.222	0.244	0.268
17:35	10/05/2005	0.269	0.293	0.161	0.188	0.213	0.222	0.245	0.269
23:35	10/05/2005	0.275	0.294	0.162	0.189	0.214	0.222	0.245	0.269
05:35	11/05/2005	0.279	0.295	0.161	0.188	0.213	0.221	0.244	0.268
11:35	11/05/2005	0.275	0.295	0.16	0.188	0.213	0.22	0.244	0.267
17:35	11/05/2005	0.267	0.292	0.162	0.189	0.214	0.221	0.245	0.269
23:35	11/05/2005	0.27	0.291	0.162	0.189	0.214	0.221	0.246	0.27
05:35	12/05/2005	0.274	0.292	0.161	0.188	0.213	0.22	0.244	0.267
11:35	12/05/2005	0.27	0.292	0.161	0.188	0.213	0.22	0.244	0.268
17:35	12/05/2005	0.267	0.29	0.162	0.19	0.215	0.221	0.246	0.271
23:35	12/05/2005	0.271	0.29	0.161	0.188	0.213	0.22	0.244	0.268
05:35	13/05/2005	0.274	0.29	0.16	0.187	0.212	0.219	0.243	0.266
11:35	13/05/2005	0.271	0.291	0.16	0.188	0.212	0.219	0.243	0.267
17:35	13/05/2005	0.263	0.288	0.161	0.189	0.214	0.22	0.245	0.269
23:35	13/05/2005	0.268	0.287	0.162	0.188	0.214	0.219	0.245	0.269
05:35	14/05/2005	0.271	0.287	0.161	0.187	0.212	0.218	0.244	0.266
11:35	14/05/2005	0.268	0.288	0.161	0.188	0.213	0.218	0.244	0.267
17:35	14/05/2005	0.261	0.286	0.161	0.188	0.214	0.219	0.245	0.269
23:35	14/05/2005	0.264	0.284	0.162	0.188	0.213	0.219	0.245	0.269
05:35	15/05/2005	0.267	0.285	0.161	0.188	0.213	0.218	0.244	0.268
11:35	15/05/2005	0.263	0.284	0.161	0.188	0.212	0.218	0.244	0.267
17:35	15/05/2005	0.261	0.283	0.162	0.188	0.213	0.218	0.245	0.269
23:35	15/05/2005	0.263	0.282	0.162	0.188	0.213	0.218	0.245	0.269
05:35	16/05/2005	0.265	0.283	0.162	0.188	0.213	0.217	0.245	0.268
11:35	16/05/2005	0.26	0.281	0.161	0.187	0.212	0.217	0.243	0.267
17:35	16/05/2005	0.255	0.278	0.161	0.188	0.213	0.217	0.244	0.268
23:35	16/05/2005	0.259	0.279	0.162	0.188	0.213	0.217	0.244	0.268
05:35	17/05/2005	0.261	0.279	0.162	0.187	0.212	0.216	0.244	0.268
11:35	17/05/2005	0.261	0.279	0.161	0.187	0.211	0.216	0.243	0.266
17:35	17/05/2005	0.259	0.279	0.161	0.187	0.212	0.216	0.244	0.268
23:35	17/05/2005	0.261	0.279	0.161	0.187	0.212	0.216	0.244	0.268
05:35	18/05/2005	0.262	0.279	0.161	0.187	0.213	0.216	0.244	0.268
11:35	18/05/2005	0.264	0.279	0.161	0.187	0.212	0.216	0.244	0.268
17:35	18/05/2005	0.375	0.337	0.161	0.187	0.211	0.215	0.243	0.267

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
23:35	18/05/2005	0.396	0.403	0.163	0.187	0.212	0.215	0.244	0.268
05:35	19/05/2005	0.396	0.414	0.167	0.188	0.212	0.215	0.244	0.268
11:35	19/05/2005	0.383	0.411	0.169	0.187	0.211	0.215	0.243	0.267
17:35	19/05/2005	0.354	0.393	0.17	0.188	0.212	0.215	0.243	0.268
23:35	19/05/2005	0.359	0.387	0.171	0.188	0.212	0.215	0.244	0.268
05:35	20/05/2005	0.368	0.389	0.171	0.189	0.212	0.215	0.243	0.268
11:35	20/05/2005	0.348	0.39	0.173	0.189	0.212	0.214	0.243	0.267
17:35	20/05/2005	0.319	0.362	0.174	0.189	0.213	0.215	0.243	0.268
23:35	20/05/2005	0.326	0.354	0.173	0.19	0.213	0.215	0.244	0.269
05:35	21/05/2005	0.334	0.354	0.172	0.189	0.212	0.214	0.243	0.267
11:35	21/05/2005	0.315	0.351	0.172	0.189	0.213	0.214	0.243	0.268
17:35	21/05/2005	0.302	0.339	0.174	0.192	0.216	0.216	0.246	0.272
23:35	21/05/2005	0.308	0.332	0.172	0.189	0.213	0.214	0.243	0.268
05:35	22/05/2005	0.317	0.337	0.171	0.189	0.213	0.214	0.243	0.268
11:35	22/05/2005	0.307	0.336	0.17	0.189	0.212	0.214	0.242	0.267
17:35	22/05/2005	0.291	0.325	0.171	0.19	0.213	0.214	0.244	0.269
23:35	22/05/2005	0.3	0.322	0.17	0.189	0.213	0.214	0.243	0.269
05:35	23/05/2005	0.308	0.324	0.17	0.189	0.213	0.213	0.243	0.268
11:35	23/05/2005	0.3	0.322	0.169	0.188	0.212	0.213	0.242	0.267
17:35	23/05/2005	0.29	0.318	0.169	0.189	0.213	0.214	0.243	0.269
23:35	23/05/2005	0.295	0.315	0.169	0.189	0.213	0.213	0.243	0.268
05:35	24/05/2005	0.299	0.317	0.168	0.189	0.213	0.213	0.242	0.268
11:35	24/05/2005	0.298	0.318	0.168	0.189	0.213	0.213	0.242	0.268
17:35	24/05/2005	0.295	0.317	0.168	0.189	0.213	0.213	0.243	0.269
23:35	24/05/2005	0.297	0.316	0.168	0.189	0.213	0.213	0.242	0.268
05:35	25/05/2005	0.3	0.318	0.168	0.189	0.213	0.213	0.242	0.269
11:35	25/05/2005	0.304	0.32	0.167	0.189	0.213	0.213	0.242	0.268
17:35	25/05/2005	0.309	0.326	0.167	0.188	0.212	0.213	0.241	0.268
23:35	25/05/2005	0.314	0.33	0.167	0.189	0.213	0.213	0.242	0.269
05:35	26/05/2005	0.319	0.334	0.168	0.189	0.213	0.213	0.242	0.269
11:35	26/05/2005	0.31	0.333	0.167	0.188	0.212	0.213	0.241	0.267
17:35	26/05/2005	0.293	0.326	0.168	0.189	0.213	0.213	0.242	0.268
23:35	26/05/2005	0.301	0.324	0.169	0.189	0.214	0.213	0.242	0.269
05:35	27/05/2005	0.308	0.323	0.167	0.188	0.212	0.212	0.24	0.266
11:35	27/05/2005	0.297	0.325	0.168	0.189	0.213	0.213	0.241	0.268
17:35	27/05/2005	0.282	0.315	0.169	0.189	0.213	0.213	0.241	0.269
23:35	27/05/2005	0.289	0.314	0.169	0.189	0.214	0.213	0.241	0.269
05:35	28/05/2005	0.294	0.313	0.168	0.187	0.212	0.212	0.239	0.266
11:35	28/05/2005	0.288	0.315	0.168	0.188	0.212	0.212	0.239	0.267
17:35	28/05/2005	0.273	0.307	0.169	0.189	0.213	0.212	0.24	0.268
23:35	28/05/2005	0.279	0.305	0.17	0.189	0.214	0.213	0.241	0.269
05:35	29/05/2005	0.285	0.306	0.168	0.187	0.212	0.212	0.239	0.267
11:35	29/05/2005	0.278	0.305	0.168	0.188	0.212	0.212	0.239	0.267
17:35	29/05/2005	0.267	0.299	0.169	0.188	0.213	0.212	0.24	0.268
23:35	29/05/2005	0.274	0.298	0.17	0.188	0.214	0.212	0.24	0.269
05:35	30/05/2005	0.279	0.298	0.168	0.187	0.211	0.211	0.238	0.266
11:35	30/05/2005	0.272	0.298	0.168	0.187	0.212	0.211	0.238	0.267
17:35	30/05/2005	0.261	0.292	0.169	0.187	0.213	0.211	0.239	0.268
23:35	30/05/2005	0.268	0.291	0.17	0.188	0.213	0.212	0.24	0.269
05:35	31/05/2005	0.273	0.292	0.168	0.186	0.211	0.21	0.238	0.267
11:35	31/05/2005	0.266	0.291	0.168	0.186	0.211	0.21	0.237	0.266
17:35	31/05/2005	0.256	0.285	0.169	0.187	0.212	0.211	0.238	0.268
23:35	31/05/2005	0.263	0.285	0.169	0.187	0.213	0.211	0.239	0.269
05:35	01/06/2005	0.268	0.286	0.167	0.185	0.211	0.21	0.237	0.266
11:35	01/06/2005	0.263	0.286	0.167	0.185	0.211	0.209	0.237	0.266
17:35	01/06/2005	0.256	0.282	0.168	0.186	0.212	0.21	0.238	0.268
23:35	01/06/2005	0.262	0.282	0.168	0.186	0.212	0.21	0.238	0.268
05:35	02/06/2005	0.267	0.284	0.167	0.185	0.21	0.209	0.237	0.266
11:35	02/06/2005	0.263	0.284	0.167	0.185	0.211	0.209	0.236	0.266
17:35	02/06/2005	0.256	0.28	0.167	0.185	0.211	0.209	0.237	0.267
23:35	02/06/2005	0.26	0.281	0.168	0.186	0.212	0.209	0.237	0.268
05:35	03/06/2005	0.264	0.281	0.167	0.185	0.21	0.209	0.236	0.266
11:35	03/06/2005	0.258	0.281	0.167	0.185	0.21	0.208	0.236	0.265
17:35	03/06/2005	0.252	0.276	0.168	0.185	0.211	0.209	0.237	0.267
23:35	03/06/2005	0.259	0.277	0.168	0.186	0.212	0.209	0.237	0.268
05:35	04/06/2005	0.263	0.278	0.167	0.184	0.21	0.208	0.235	0.265
11:35	04/06/2005	0.259	0.278	0.166	0.184	0.21	0.208	0.235	0.265
17:35	04/06/2005	0.253	0.276	0.167	0.185	0.211	0.208	0.236	0.266
23:35	04/06/2005	0.257	0.276	0.167	0.185	0.211	0.208	0.236	0.267
05:35	05/06/2005	0.261	0.277	0.166	0.184	0.21	0.208	0.235	0.265
11:35	05/06/2005	0.256	0.277	0.166	0.184	0.21	0.207	0.234	0.264

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
17:35	05/06/2005	0.249	0.273	0.167	0.185	0.211	0.208	0.236	0.266
23:35	05/06/2005	0.254	0.274	0.167	0.185	0.211	0.208	0.236	0.266
05:35	06/06/2005	0.26	0.276	0.167	0.185	0.211	0.208	0.235	0.265
11:35	06/06/2005	0.255	0.276	0.167	0.185	0.211	0.208	0.235	0.265
17:35	06/06/2005	0.247	0.27	0.166	0.184	0.21	0.207	0.234	0.264
23:35	06/06/2005	0.253	0.272	0.167	0.185	0.211	0.208	0.235	0.266
05:35	07/06/2005	0.256	0.272	0.165	0.183	0.209	0.207	0.233	0.263
11:35	07/06/2005	0.251	0.273	0.166	0.184	0.21	0.207	0.233	0.264
17:35	07/06/2005	0.245	0.268	0.167	0.185	0.211	0.207	0.234	0.265
23:35	07/06/2005	0.25	0.269	0.167	0.185	0.211	0.207	0.235	0.265
05:35	08/06/2005	0.253	0.27	0.165	0.183	0.209	0.206	0.233	0.263
11:35	08/06/2005	0.248	0.268	0.164	0.183	0.208	0.206	0.231	0.261
17:35	08/06/2005	0.241	0.264	0.165	0.184	0.21	0.207	0.233	0.263
23:35	08/06/2005	0.246	0.265	0.166	0.184	0.21	0.207	0.234	0.264
05:35	09/06/2005	0.25	0.267	0.166	0.184	0.21	0.207	0.233	0.263
11:35	09/06/2005	0.245	0.268	0.166	0.183	0.21	0.206	0.233	0.263
17:35	09/06/2005	0.242	0.264	0.165	0.182	0.209	0.206	0.232	0.262
23:35	09/06/2005	0.246	0.266	0.166	0.184	0.21	0.206	0.233	0.264
05:35	10/06/2005	0.248	0.268	0.165	0.183	0.209	0.206	0.232	0.262
11:35	10/06/2005	0.246	0.267	0.164	0.182	0.208	0.205	0.231	0.261
17:35	10/06/2005	0.242	0.265	0.165	0.183	0.21	0.206	0.232	0.262
23:35	10/06/2005	0.246	0.266	0.165	0.183	0.209	0.206	0.232	0.262
05:35	11/06/2005	0.249	0.267	0.164	0.182	0.208	0.205	0.231	0.26
11:35	11/06/2005	0.247	0.268	0.165	0.183	0.209	0.206	0.231	0.261
17:35	11/06/2005	0.246	0.267	0.165	0.183	0.21	0.206	0.231	0.261
23:35	11/06/2005	0.249	0.268	0.165	0.183	0.209	0.206	0.231	0.261
05:35	12/06/2005	0.25	0.269	0.165	0.183	0.209	0.206	0.231	0.261
11:35	12/06/2005	0.25	0.27	0.165	0.183	0.209	0.206	0.231	0.261
17:35	12/06/2005	0.25	0.269	0.165	0.184	0.209	0.206	0.23	0.26
23:35	12/06/2005	0.251	0.27	0.165	0.184	0.21	0.206	0.23	0.26
05:35	13/06/2005	0.252	0.27	0.165	0.184	0.21	0.206	0.23	0.26
11:35	13/06/2005	0.252	0.271	0.165	0.184	0.21	0.206	0.23	0.26
17:35	13/06/2005	0.254	0.272	0.166	0.185	0.211	0.206	0.231	0.261
23:35	13/06/2005	0.263	0.274	0.165	0.185	0.21	0.206	0.23	0.26
05:35	14/06/2005	0.279	0.281	0.166	0.185	0.21	0.206	0.23	0.26
11:35	14/06/2005	0.295	0.291	0.165	0.184	0.209	0.206	0.229	0.258
17:35	14/06/2005	0.294	0.3	0.168	0.186	0.212	0.207	0.231	0.261
23:35	14/06/2005	0.296	0.302	0.168	0.185	0.211	0.206	0.23	0.26
05:35	15/06/2005	0.303	0.307	0.168	0.185	0.21	0.206	0.23	0.259
11:35	15/06/2005	0.326	0.319	0.168	0.185	0.21	0.206	0.229	0.258
17:35	15/06/2005	0.339	0.343	0.17	0.185	0.21	0.206	0.229	0.259
23:35	15/06/2005	0.345	0.355	0.173	0.186	0.211	0.206	0.229	0.259
05:35	16/06/2005	0.352	0.361	0.174	0.186	0.211	0.206	0.229	0.259
11:35	16/06/2005	0.346	0.362	0.175	0.186	0.211	0.206	0.229	0.258
17:35	16/06/2005	0.324	0.351	0.175	0.187	0.211	0.207	0.229	0.258
23:35	16/06/2005	0.324	0.345	0.176	0.188	0.212	0.207	0.23	0.259
05:35	17/06/2005	0.332	0.346	0.174	0.187	0.211	0.206	0.229	0.258
11:35	17/06/2005	0.32	0.346	0.175	0.188	0.212	0.207	0.229	0.258
17:35	17/06/2005	0.304	0.335	0.174	0.187	0.212	0.206	0.229	0.258
23:35	17/06/2005	0.308	0.331	0.175	0.188	0.212	0.207	0.229	0.258
05:35	18/06/2005	0.314	0.33	0.173	0.186	0.21	0.206	0.227	0.256
11:35	18/06/2005	0.306	0.332	0.173	0.187	0.211	0.206	0.228	0.257
17:35	18/06/2005	0.29	0.321	0.174	0.187	0.212	0.206	0.229	0.257
23:35	18/06/2005	0.296	0.319	0.174	0.188	0.213	0.207	0.229	0.258
05:35	19/06/2005	0.302	0.319	0.172	0.186	0.21	0.205	0.227	0.255
11:35	19/06/2005	0.296	0.322	0.173	0.188	0.212	0.206	0.229	0.257
17:35	19/06/2005	0.292	0.317	0.173	0.187	0.212	0.206	0.228	0.257
23:35	19/06/2005	0.295	0.316	0.173	0.187	0.212	0.206	0.229	0.257
05:35	20/06/2005	0.301	0.316	0.171	0.185	0.21	0.205	0.227	0.254
11:35	20/06/2005	0.295	0.318	0.172	0.187	0.212	0.206	0.228	0.256
17:35	20/06/2005	0.277	0.308	0.172	0.187	0.212	0.206	0.228	0.256
23:35	20/06/2005	0.282	0.305	0.172	0.187	0.213	0.206	0.229	0.257
05:35	21/06/2005	0.289	0.307	0.171	0.186	0.211	0.206	0.228	0.255
11:35	21/06/2005	0.282	0.305	0.17	0.185	0.211	0.205	0.227	0.254
17:35	21/06/2005	0.273	0.301	0.171	0.186	0.212	0.206	0.228	0.256
23:35	21/06/2005	0.277	0.299	0.171	0.186	0.212	0.206	0.228	0.256
05:35	22/06/2005	0.282	0.299	0.17	0.185	0.21	0.205	0.227	0.254
11:35	22/06/2005	0.285	0.302	0.171	0.186	0.211	0.205	0.228	0.255
17:35	22/06/2005	0.395	0.37	0.172	0.186	0.211	0.205	0.228	0.255
23:35	22/06/2005	0.412	0.428	0.186	0.187	0.211	0.205	0.227	0.255
05:35	23/06/2005	0.416	0.438	0.192	0.19	0.212	0.205	0.227	0.254

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
11:35	23/06/2005	0.439	0.476	0.201	0.199	0.217	0.208	0.227	0.254
17:35	23/06/2005	0.439	0.483	0.203	0.209	0.225	0.228	0.227	0.254
23:35	23/06/2005	0.43	0.475	0.202	0.209	0.227	0.23	0.227	0.254
05:35	24/06/2005	0.431	0.469	0.199	0.207	0.225	0.228	0.226	0.252
11:35	24/06/2005	0.405	0.464	0.2	0.207	0.226	0.229	0.227	0.253
17:35	24/06/2005	0.36	0.422	0.197	0.207	0.226	0.229	0.227	0.254
23:35	24/06/2005	0.362	0.406	0.194	0.205	0.225	0.228	0.229	0.254
05:35	25/06/2005	0.37	0.407	0.193	0.203	0.223	0.227	0.23	0.253
11:35	25/06/2005	0.372	0.411	0.192	0.202	0.223	0.227	0.232	0.253
17:35	25/06/2005	0.361	0.4	0.191	0.201	0.222	0.226	0.234	0.252
23:35	25/06/2005	0.36	0.397	0.191	0.202	0.223	0.226	0.238	0.254
05:35	26/06/2005	0.366	0.397	0.189	0.2	0.221	0.225	0.239	0.252
11:35	26/06/2005	0.351	0.392	0.188	0.2	0.221	0.224	0.239	0.252
17:35	26/06/2005	0.327	0.373	0.187	0.199	0.221	0.224	0.24	0.252
23:35	26/06/2005	0.333	0.368	0.187	0.199	0.222	0.225	0.242	0.253
05:35	27/06/2005	0.34	0.367	0.185	0.197	0.22	0.223	0.241	0.251
11:35	27/06/2005	0.332	0.368	0.185	0.198	0.22	0.223	0.241	0.252
17:35	27/06/2005	0.312	0.356	0.185	0.198	0.221	0.223	0.243	0.253
23:35	27/06/2005	0.316	0.35	0.184	0.197	0.22	0.223	0.243	0.253
05:35	28/06/2005	0.32	0.346	0.181	0.194	0.217	0.22	0.24	0.25
11:35	28/06/2005	0.318	0.349	0.182	0.196	0.219	0.221	0.242	0.252
17:35	28/06/2005	0.318	0.347	0.182	0.196	0.219	0.222	0.243	0.252
23:35	28/06/2005	0.334	0.357	0.182	0.195	0.219	0.221	0.242	0.252
05:35	29/06/2005	0.345	0.373	0.183	0.195	0.218	0.221	0.242	0.252
11:35	29/06/2005	0.343	0.375	0.184	0.195	0.218	0.22	0.241	0.251
17:35	29/06/2005	0.322	0.366	0.185	0.196	0.219	0.221	0.243	0.252
23:35	29/06/2005	0.323	0.358	0.184	0.195	0.219	0.22	0.242	0.252
05:35	30/06/2005	0.331	0.358	0.183	0.195	0.218	0.22	0.241	0.251
11:35	30/06/2005	0.319	0.355	0.182	0.194	0.217	0.219	0.24	0.25
17:35	30/06/2005	0.298	0.342	0.182	0.195	0.219	0.22	0.242	0.252
23:35	30/06/2005	0.304	0.337	0.182	0.194	0.218	0.219	0.242	0.253
05:35	01/07/2005	0.31	0.335	0.18	0.192	0.216	0.218	0.24	0.25
11:35	01/07/2005	0.305	0.335	0.179	0.192	0.216	0.217	0.24	0.25
17:35	01/07/2005	0.29	0.326	0.18	0.193	0.217	0.218	0.242	0.252
23:35	01/07/2005	0.297	0.324	0.179	0.192	0.217	0.217	0.241	0.252
05:35	02/07/2005	0.303	0.324	0.177	0.19	0.215	0.216	0.239	0.25
11:35	02/07/2005	0.299	0.325	0.177	0.191	0.216	0.216	0.24	0.251
17:35	02/07/2005	0.3	0.323	0.178	0.192	0.217	0.217	0.241	0.253
23:35	02/07/2005	0.412	0.426	0.188	0.191	0.215	0.216	0.24	0.251
05:35	03/07/2005	0.413	0.43	0.192	0.193	0.216	0.216	0.24	0.251
11:35	03/07/2005	0.404	0.429	0.193	0.195	0.216	0.217	0.239	0.251
17:35	03/07/2005	0.367	0.407	0.193	0.197	0.217	0.218	0.24	0.252
23:35	03/07/2005	0.376	0.407	0.193	0.197	0.218	0.219	0.24	0.252
05:35	04/07/2005	0.382	0.408	0.192	0.197	0.217	0.218	0.239	0.251
11:35	04/07/2005	0.37	0.403	0.192	0.198	0.218	0.218	0.239	0.251
17:35	04/07/2005	0.342	0.38	0.19	0.198	0.218	0.219	0.24	0.252
23:35	04/07/2005	0.338	0.369	0.188	0.197	0.219	0.219	0.24	0.253
05:35	05/07/2005	0.342	0.366	0.186	0.195	0.217	0.218	0.239	0.251
11:35	05/07/2005	0.331	0.362	0.185	0.195	0.217	0.218	0.239	0.251
17:35	05/07/2005	0.314	0.351	0.184	0.195	0.218	0.218	0.24	0.252
23:35	05/07/2005	0.312	0.343	0.183	0.194	0.218	0.218	0.24	0.253
05:35	06/07/2005	0.336	0.355	0.182	0.194	0.217	0.217	0.24	0.252
11:35	06/07/2005	0.331	0.363	0.183	0.194	0.217	0.217	0.24	0.252
17:35	06/07/2005	0.326	0.358	0.184	0.194	0.217	0.217	0.241	0.253
23:35	06/07/2005	0.351	0.376	0.184	0.193	0.216	0.217	0.24	0.252
05:35	07/07/2005	0.359	0.381	0.185	0.193	0.215	0.216	0.239	0.251
11:35	07/07/2005	0.353	0.382	0.186	0.193	0.216	0.216	0.239	0.252
17:35	07/07/2005	0.334	0.369	0.186	0.194	0.217	0.216	0.24	0.253
23:35	07/07/2005	0.331	0.36	0.184	0.194	0.217	0.216	0.24	0.253
05:35	08/07/2005	0.332	0.356	0.182	0.193	0.216	0.215	0.238	0.252
11:35	08/07/2005	0.323	0.353	0.182	0.193	0.216	0.215	0.238	0.252
17:35	08/07/2005	0.305	0.341	0.181	0.192	0.216	0.216	0.239	0.253
23:35	08/07/2005	0.306	0.336	0.181	0.192	0.216	0.216	0.239	0.253
05:35	09/07/2005	0.312	0.336	0.18	0.192	0.216	0.215	0.239	0.253
11:35	09/07/2005	0.313	0.335	0.179	0.191	0.215	0.214	0.237	0.252
17:35	09/07/2005	0.301	0.332	0.179	0.192	0.216	0.215	0.238	0.253
23:35	09/07/2005	0.303	0.329	0.179	0.192	0.216	0.215	0.239	0.254
05:35	10/07/2005	0.31	0.329	0.178	0.191	0.215	0.214	0.238	0.253
11:35	10/07/2005	0.304	0.329	0.178	0.191	0.215	0.214	0.237	0.253
17:35	10/07/2005	0.293	0.323	0.177	0.191	0.215	0.214	0.237	0.253
23:35	10/07/2005	0.296	0.321	0.177	0.191	0.216	0.214	0.238	0.254

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
05:35	11/07/2005	0.302	0.321	0.176	0.19	0.214	0.213	0.237	0.252
11:35	11/07/2005	0.295	0.32	0.176	0.19	0.215	0.213	0.236	0.252
17:35	11/07/2005	0.284	0.315	0.177	0.192	0.217	0.214	0.238	0.255
23:35	11/07/2005	0.289	0.312	0.175	0.19	0.215	0.214	0.237	0.254
05:35	12/07/2005	0.294	0.312	0.174	0.189	0.213	0.212	0.236	0.252
11:35	12/07/2005	0.288	0.312	0.174	0.189	0.214	0.212	0.235	0.252
17:35	12/07/2005	0.273	0.303	0.174	0.189	0.214	0.213	0.236	0.253
23:35	12/07/2005	0.278	0.302	0.174	0.189	0.214	0.213	0.237	0.254
05:35	13/07/2005	0.286	0.304	0.174	0.189	0.214	0.212	0.236	0.254
11:35	13/07/2005	0.282	0.305	0.173	0.189	0.214	0.212	0.236	0.253
17:35	13/07/2005	0.277	0.301	0.173	0.189	0.214	0.212	0.236	0.254
23:35	13/07/2005	0.281	0.302	0.173	0.189	0.214	0.212	0.236	0.254
05:35	14/07/2005	0.287	0.303	0.172	0.188	0.213	0.211	0.235	0.253
11:35	14/07/2005	0.282	0.302	0.171	0.187	0.212	0.21	0.234	0.252
17:35	14/07/2005	0.272	0.296	0.171	0.187	0.212	0.211	0.234	0.252
23:35	14/07/2005	0.276	0.297	0.172	0.188	0.213	0.211	0.236	0.254
05:35	15/07/2005	0.281	0.297	0.17	0.187	0.212	0.21	0.234	0.253
11:35	15/07/2005	0.277	0.297	0.17	0.186	0.212	0.21	0.234	0.252
17:35	15/07/2005	0.269	0.292	0.17	0.187	0.213	0.211	0.235	0.254
23:35	15/07/2005	0.273	0.292	0.17	0.186	0.212	0.21	0.235	0.254
05:35	16/07/2005	0.276	0.293	0.17	0.186	0.212	0.21	0.234	0.254
11:35	16/07/2005	0.277	0.294	0.17	0.187	0.213	0.21	0.234	0.254
17:35	16/07/2005	0.271	0.291	0.169	0.185	0.212	0.21	0.233	0.253
23:35	16/07/2005	0.272	0.291	0.169	0.186	0.212	0.21	0.234	0.254
05:35	17/07/2005	0.276	0.291	0.169	0.185	0.211	0.209	0.233	0.253
11:35	17/07/2005	0.272	0.29	0.168	0.185	0.211	0.209	0.232	0.252
17:35	17/07/2005	0.267	0.288	0.169	0.186	0.213	0.21	0.234	0.255
23:35	17/07/2005	0.273	0.287	0.169	0.185	0.212	0.209	0.233	0.254
05:35	18/07/2005	0.284	0.292	0.169	0.185	0.212	0.209	0.233	0.253
11:35	18/07/2005	0.287	0.299	0.17	0.186	0.213	0.21	0.233	0.254
17:35	18/07/2005	0.337	0.322	0.168	0.185	0.211	0.209	0.232	0.252
23:35	18/07/2005	0.395	0.401	0.17	0.186	0.212	0.209	0.232	0.253
05:35	19/07/2005	0.428	0.447	0.178	0.186	0.212	0.209	0.232	0.253
11:35	19/07/2005	0.407	0.445	0.189	0.188	0.212	0.209	0.231	0.252
17:35	19/07/2005	0.369	0.413	0.19	0.19	0.213	0.209	0.232	0.253
23:35	19/07/2005	0.375	0.408	0.19	0.192	0.214	0.21	0.232	0.253
05:35	20/07/2005	0.382	0.41	0.19	0.192	0.215	0.21	0.231	0.253
11:35	20/07/2005	0.366	0.405	0.189	0.193	0.215	0.21	0.231	0.252
17:35	20/07/2005	0.341	0.384	0.188	0.193	0.216	0.211	0.231	0.253
23:35	20/07/2005	0.346	0.376	0.187	0.193	0.216	0.211	0.231	0.253
05:35	21/07/2005	0.354	0.378	0.186	0.192	0.216	0.21	0.231	0.253
11:35	21/07/2005	0.347	0.376	0.185	0.192	0.215	0.21	0.23	0.252
17:35	21/07/2005	0.33	0.366	0.184	0.192	0.216	0.211	0.231	0.253
23:35	21/07/2005	0.328	0.358	0.183	0.192	0.216	0.211	0.231	0.253
05:35	22/07/2005	0.333	0.358	0.182	0.192	0.216	0.211	0.231	0.252
11:35	22/07/2005	0.326	0.356	0.182	0.192	0.216	0.211	0.23	0.252
17:35	22/07/2005	0.311	0.345	0.181	0.191	0.216	0.211	0.231	0.253
23:35	22/07/2005	0.315	0.342	0.18	0.191	0.216	0.211	0.231	0.253
05:35	23/07/2005	0.32	0.343	0.18	0.191	0.215	0.211	0.23	0.252
11:35	23/07/2005	0.365	0.36	0.18	0.191	0.215	0.21	0.23	0.252
17:35	23/07/2005	0.479	0.519	0.188	0.191	0.215	0.21	0.23	0.252
23:35	23/07/2005	0.482	0.537	0.206	0.213	0.227	0.214	0.23	0.251
05:35	24/07/2005	0.475	0.532	0.206	0.215	0.231	0.225	0.23	0.251
11:35	24/07/2005	0.483	0.548	0.207	0.216	0.232	0.227	0.23	0.251
17:35	24/07/2005	0.466	0.54	0.209	0.219	0.235	0.231	0.231	0.252
23:35	24/07/2005	0.451	0.517	0.207	0.217	0.233	0.231	0.234	0.252
05:35	25/07/2005	0.45	0.503	0.204	0.214	0.23	0.228	0.243	0.25
11:35	25/07/2005	0.442	0.504	0.204	0.214	0.23	0.228	0.246	0.251
17:35	25/07/2005	0.431	0.501	0.205	0.214	0.229	0.227	0.246	0.251
23:35	25/07/2005	0.449	0.511	0.207	0.216	0.231	0.226	0.246	0.251
05:35	26/07/2005	0.453	0.506	0.205	0.215	0.23	0.226	0.245	0.251
11:35	26/07/2005	0.436	0.498	0.204	0.213	0.229	0.225	0.244	0.249
17:35	26/07/2005	0.409	0.477	0.203	0.214	0.23	0.226	0.246	0.252
23:35	26/07/2005	0.406	0.461	0.202	0.212	0.229	0.225	0.246	0.253
05:35	27/07/2005	0.416	0.458	0.199	0.21	0.227	0.223	0.244	0.253
11:35	27/07/2005	0.407	0.458	0.199	0.209	0.226	0.223	0.243	0.255
17:35	27/07/2005	0.37	0.432	0.198	0.209	0.227	0.223	0.244	0.259
23:35	27/07/2005	0.37	0.416	0.196	0.207	0.226	0.222	0.244	0.261
05:35	28/07/2005	0.377	0.413	0.194	0.206	0.225	0.221	0.243	0.261
11:35	28/07/2005	0.373	0.413	0.193	0.206	0.225	0.221	0.243	0.263
17:35	28/07/2005	0.383	0.422	0.193	0.205	0.224	0.22	0.242	0.263

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
23:35	28/07/2005	0.384	0.425	0.194	0.205	0.224	0.22	0.242	0.264
05:35	29/07/2005	0.39	0.427	0.194	0.205	0.224	0.219	0.241	0.264
11:35	29/07/2005	0.373	0.422	0.193	0.204	0.223	0.218	0.24	0.263
17:35	29/07/2005	0.353	0.404	0.192	0.203	0.223	0.218	0.241	0.264
23:35	29/07/2005	0.358	0.4	0.192	0.203	0.223	0.218	0.241	0.265
05:35	30/07/2005	0.366	0.403	0.192	0.203	0.223	0.217	0.24	0.264
11:35	30/07/2005	0.355	0.397	0.19	0.201	0.221	0.216	0.238	0.263
17:35	30/07/2005	0.335	0.38	0.188	0.199	0.221	0.216	0.239	0.264
23:35	30/07/2005	0.333	0.372	0.188	0.199	0.221	0.216	0.239	0.264
05:35	31/07/2005	0.339	0.372	0.187	0.199	0.221	0.215	0.239	0.264
11:35	31/07/2005	0.345	0.373	0.185	0.198	0.22	0.214	0.237	0.261
17:35	31/07/2005	0.326	0.367	0.185	0.197	0.22	0.215	0.238	0.263
23:35	31/07/2005	0.328	0.363	0.185	0.197	0.22	0.215	0.238	0.264
05:35	01/08/2005	0.335	0.363	0.185	0.197	0.22	0.214	0.237	0.263
11:35	01/08/2005	0.322	0.357	0.183	0.195	0.218	0.213	0.236	0.261
17:35	01/08/2005	0.304	0.343	0.181	0.193	0.218	0.214	0.237	0.263
23:35	01/08/2005	0.33	0.355	0.181	0.193	0.218	0.213	0.236	0.262
05:35	02/08/2005	0.341	0.364	0.182	0.193	0.218	0.213	0.236	0.262
11:35	02/08/2005	0.341	0.367	0.182	0.193	0.218	0.212	0.236	0.262
17:35	02/08/2005	0.335	0.363	0.181	0.192	0.217	0.212	0.235	0.261
23:35	02/08/2005	0.338	0.363	0.181	0.193	0.217	0.212	0.235	0.261
05:35	03/08/2005	0.341	0.365	0.181	0.193	0.218	0.212	0.235	0.261
11:35	03/08/2005	0.335	0.361	0.18	0.192	0.217	0.211	0.234	0.259
17:35	03/08/2005	0.316	0.35	0.179	0.191	0.216	0.211	0.234	0.26
23:35	03/08/2005	0.316	0.346	0.179	0.191	0.217	0.211	0.235	0.26
05:35	04/08/2005	0.323	0.346	0.178	0.191	0.216	0.211	0.233	0.259
11:35	04/08/2005	0.314	0.343	0.178	0.19	0.216	0.211	0.233	0.259
17:35	04/08/2005	0.298	0.33	0.176	0.188	0.215	0.211	0.234	0.259
23:35	04/08/2005	0.298	0.327	0.176	0.188	0.215	0.211	0.234	0.26
05:35	05/08/2005	0.302	0.326	0.175	0.188	0.214	0.21	0.233	0.258
11:35	05/08/2005	0.295	0.321	0.173	0.186	0.213	0.209	0.231	0.257
17:35	05/08/2005	0.286	0.313	0.173	0.185	0.213	0.21	0.232	0.258
23:35	05/08/2005	0.288	0.312	0.173	0.185	0.214	0.21	0.233	0.259
05:35	06/08/2005	0.293	0.314	0.172	0.185	0.213	0.209	0.232	0.258
11:35	06/08/2005	0.286	0.31	0.171	0.184	0.212	0.209	0.231	0.256
17:35	06/08/2005	0.274	0.3	0.17	0.182	0.211	0.209	0.231	0.256
23:35	06/08/2005	0.277	0.3	0.171	0.182	0.212	0.209	0.232	0.257
05:35	07/08/2005	0.281	0.302	0.171	0.183	0.212	0.209	0.231	0.257
11:35	07/08/2005	0.282	0.303	0.17	0.183	0.212	0.209	0.231	0.257
17:35	07/08/2005	0.278	0.3	0.17	0.183	0.212	0.209	0.231	0.257
23:35	07/08/2005	0.279	0.299	0.17	0.182	0.211	0.208	0.23	0.256
05:35	08/08/2005	0.282	0.299	0.169	0.182	0.211	0.208	0.229	0.255
11:35	08/08/2005	0.282	0.301	0.17	0.183	0.211	0.208	0.229	0.255
17:35	08/08/2005	0.272	0.294	0.168	0.181	0.21	0.208	0.229	0.255
23:35	08/08/2005	0.273	0.293	0.168	0.181	0.21	0.208	0.229	0.255
05:35	09/08/2005	0.277	0.295	0.168	0.181	0.211	0.208	0.229	0.255
11:35	09/08/2005	0.273	0.293	0.168	0.181	0.21	0.207	0.228	0.254
17:35	09/08/2005	0.266	0.289	0.167	0.18	0.21	0.208	0.229	0.255
23:35	09/08/2005	0.268	0.288	0.167	0.18	0.21	0.208	0.229	0.255
05:35	10/08/2005	0.271	0.289	0.167	0.18	0.209	0.207	0.228	0.254
11:35	10/08/2005	0.269	0.288	0.167	0.18	0.21	0.208	0.228	0.254
17:35	10/08/2005	0.261	0.283	0.166	0.179	0.209	0.208	0.228	0.254
23:35	10/08/2005	0.264	0.283	0.166	0.179	0.209	0.207	0.228	0.254
05:35	11/08/2005	0.267	0.284	0.166	0.179	0.209	0.207	0.228	0.253
11:35	11/08/2005	0.268	0.285	0.166	0.179	0.209	0.207	0.227	0.253
17:35	11/08/2005	0.267	0.285	0.166	0.18	0.21	0.207	0.228	0.254
23:35	11/08/2005	0.267	0.284	0.166	0.179	0.209	0.207	0.227	0.253
05:35	12/08/2005	0.271	0.286	0.166	0.179	0.209	0.207	0.227	0.252
11:35	12/08/2005	0.269	0.288	0.166	0.181	0.211	0.208	0.227	0.254
17:35	12/08/2005	0.264	0.283	0.166	0.179	0.209	0.207	0.227	0.253
23:35	12/08/2005	0.265	0.282	0.165	0.179	0.209	0.207	0.226	0.252
05:35	13/08/2005	0.268	0.284	0.165	0.179	0.209	0.207	0.226	0.252
11:35	13/08/2005	0.267	0.285	0.166	0.18	0.209	0.207	0.227	0.252
17:35	13/08/2005	0.263	0.282	0.165	0.179	0.209	0.207	0.226	0.252
23:35	13/08/2005	0.266	0.282	0.165	0.179	0.209	0.207	0.226	0.252
05:35	14/08/2005	0.269	0.283	0.165	0.179	0.209	0.207	0.226	0.251
11:35	14/08/2005	0.269	0.284	0.164	0.179	0.208	0.207	0.225	0.25
17:35	14/08/2005	0.267	0.283	0.165	0.179	0.209	0.207	0.226	0.251
23:35	14/08/2005	0.271	0.284	0.164	0.178	0.208	0.207	0.225	0.251
05:35	15/08/2005	0.275	0.286	0.164	0.178	0.208	0.207	0.225	0.25
11:35	15/08/2005	0.274	0.288	0.164	0.179	0.208	0.207	0.225	0.25



MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
17:35	15/08/2005	0.272	0.288	0.165	0.179	0.209	0.207	0.226	0.251
23:35	15/08/2005	0.273	0.287	0.165	0.179	0.209	0.207	0.225	0.25
05:35	16/08/2005	0.275	0.289	0.164	0.179	0.209	0.207	0.225	0.25
11:35	16/08/2005	0.275	0.289	0.164	0.179	0.209	0.207	0.224	0.249
17:35	16/08/2005	0.272	0.288	0.164	0.179	0.209	0.207	0.224	0.25
23:35	16/08/2005	0.273	0.288	0.164	0.179	0.209	0.207	0.224	0.25
05:35	17/08/2005	0.275	0.289	0.164	0.179	0.209	0.207	0.224	0.249
11:35	17/08/2005	0.275	0.289	0.164	0.179	0.208	0.207	0.223	0.248
17:35	17/08/2005	0.278	0.291	0.165	0.18	0.209	0.207	0.224	0.249
23:35	17/08/2005	0.315	0.296	0.165	0.18	0.209	0.207	0.224	0.249
05:35	18/08/2005	0.385	0.337	0.166	0.18	0.209	0.207	0.224	0.248
11:35	18/08/2005	0.394	0.37	0.166	0.18	0.209	0.207	0.224	0.248
17:35	18/08/2005	0.39	0.386	0.168	0.18	0.209	0.207	0.224	0.248
23:35	18/08/2005	0.39	0.392	0.17	0.18	0.209	0.207	0.224	0.248
05:35	19/08/2005	0.392	0.398	0.172	0.18	0.209	0.207	0.224	0.248
11:35	19/08/2005	0.388	0.4	0.174	0.181	0.209	0.207	0.223	0.248
17:35	19/08/2005	0.38	0.397	0.175	0.181	0.209	0.208	0.223	0.248
23:35	19/08/2005	0.381	0.397	0.177	0.182	0.21	0.208	0.224	0.248
05:35	20/08/2005	0.388	0.4	0.178	0.182	0.21	0.208	0.224	0.247
11:35	20/08/2005	0.38	0.398	0.178	0.182	0.209	0.208	0.223	0.246
17:35	20/08/2005	0.362	0.389	0.178	0.182	0.21	0.208	0.224	0.247
23:35	20/08/2005	0.36	0.385	0.179	0.182	0.21	0.208	0.224	0.247
05:35	21/08/2005	0.363	0.384	0.179	0.182	0.21	0.208	0.223	0.247
11:35	21/08/2005	0.354	0.378	0.177	0.181	0.209	0.207	0.222	0.245
17:35	21/08/2005	0.333	0.368	0.178	0.182	0.21	0.209	0.224	0.248
23:35	21/08/2005	0.344	0.364	0.177	0.181	0.209	0.208	0.223	0.246
05:35	22/08/2005	0.413	0.425	0.18	0.182	0.21	0.208	0.223	0.246
11:35	22/08/2005	0.404	0.431	0.184	0.182	0.209	0.208	0.222	0.245
17:35	22/08/2005	0.376	0.416	0.185	0.182	0.21	0.208	0.223	0.246
23:35	22/08/2005	0.378	0.407	0.185	0.183	0.21	0.208	0.223	0.246
05:35	23/08/2005	0.386	0.41	0.186	0.183	0.21	0.208	0.223	0.246
11:35	23/08/2005	0.379	0.409	0.186	0.184	0.21	0.208	0.223	0.245
17:35	23/08/2005	0.358	0.395	0.186	0.184	0.211	0.209	0.224	0.247
23:35	23/08/2005	0.363	0.39	0.184	0.183	0.211	0.209	0.223	0.245
05:35	24/08/2005	0.372	0.394	0.184	0.184	0.211	0.209	0.223	0.245
11:35	24/08/2005	0.363	0.392	0.183	0.184	0.21	0.209	0.222	0.244
17:35	24/08/2005	0.345	0.38	0.183	0.184	0.211	0.21	0.223	0.246
23:35	24/08/2005	0.346	0.374	0.182	0.183	0.211	0.21	0.223	0.245
05:35	25/08/2005	0.354	0.375	0.182	0.183	0.211	0.21	0.223	0.244
11:35	25/08/2005	0.346	0.373	0.181	0.183	0.21	0.21	0.222	0.243
17:35	25/08/2005	0.324	0.361	0.181	0.183	0.211	0.211	0.223	0.245
23:35	25/08/2005	0.327	0.356	0.18	0.183	0.211	0.211	0.223	0.245
05:35	26/08/2005	0.335	0.358	0.179	0.183	0.211	0.211	0.223	0.244
11:35	26/08/2005	0.327	0.355	0.178	0.182	0.21	0.211	0.222	0.243
17:35	26/08/2005	0.306	0.341	0.177	0.181	0.21	0.211	0.223	0.244
23:35	26/08/2005	0.307	0.336	0.177	0.182	0.21	0.211	0.223	0.244
05:35	27/08/2005	0.313	0.337	0.176	0.181	0.21	0.211	0.223	0.244
11:35	27/08/2005	0.306	0.333	0.175	0.18	0.209	0.21	0.222	0.242
17:35	27/08/2005	0.29	0.322	0.174	0.18	0.21	0.211	0.223	0.244
23:35	27/08/2005	0.292	0.317	0.173	0.18	0.209	0.211	0.223	0.244
05:35	28/08/2005	0.298	0.32	0.173	0.18	0.209	0.21	0.222	0.243
11:35	28/08/2005	0.292	0.316	0.171	0.179	0.208	0.21	0.222	0.242
17:35	28/08/2005	0.278	0.306	0.17	0.177	0.208	0.21	0.223	0.243
23:35	28/08/2005	0.28	0.304	0.17	0.177	0.208	0.211	0.223	0.243
05:35	29/08/2005	0.283	0.305	0.17	0.178	0.208	0.21	0.223	0.243
11:35	29/08/2005	0.283	0.305	0.169	0.178	0.208	0.21	0.222	0.242
17:35	29/08/2005	0.281	0.302	0.169	0.177	0.207	0.21	0.222	0.242
23:35	29/08/2005	0.286	0.304	0.169	0.178	0.208	0.21	0.222	0.242
05:35	30/08/2005	0.335	0.316	0.169	0.178	0.208	0.21	0.222	0.242
11:35	30/08/2005	0.351	0.338	0.17	0.179	0.208	0.21	0.222	0.242
17:35	30/08/2005	0.343	0.346	0.171	0.179	0.208	0.21	0.222	0.242
23:35	30/08/2005	0.346	0.35	0.171	0.179	0.209	0.21	0.223	0.242
05:35	31/08/2005	0.352	0.355	0.172	0.18	0.209	0.21	0.222	0.242
11:35	31/08/2005	0.346	0.356	0.172	0.179	0.208	0.21	0.222	0.241
17:35	31/08/2005	0.336	0.353	0.174	0.181	0.21	0.211	0.223	0.243
23:35	31/08/2005	0.36	0.365	0.174	0.18	0.209	0.21	0.222	0.241
05:35	01/09/2005	0.37	0.375	0.175	0.18	0.209	0.21	0.222	0.241
11:35	01/09/2005	0.367	0.38	0.176	0.18	0.209	0.21	0.222	0.24
17:35	01/09/2005	0.345	0.372	0.177	0.181	0.21	0.211	0.223	0.242
23:35	01/09/2005	0.351	0.37	0.177	0.181	0.21	0.21	0.222	0.241
05:35	02/09/2005	0.357	0.371	0.177	0.181	0.209	0.21	0.222	0.24

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
11:35	02/09/2005	0.366	0.377	0.177	0.181	0.209	0.21	0.222	0.24
17:35	02/09/2005	0.352	0.374	0.177	0.181	0.209	0.21	0.222	0.24
23:35	02/09/2005	0.352	0.373	0.178	0.182	0.21	0.211	0.222	0.241
05:35	03/09/2005	0.359	0.376	0.179	0.182	0.21	0.211	0.222	0.241
11:35	03/09/2005	0.353	0.375	0.178	0.182	0.21	0.21	0.222	0.24
17:35	03/09/2005	0.337	0.366	0.179	0.182	0.21	0.211	0.223	0.241
23:35	03/09/2005	0.341	0.365	0.178	0.182	0.21	0.211	0.222	0.241
05:35	04/09/2005	0.348	0.366	0.178	0.182	0.21	0.21	0.222	0.24
11:35	04/09/2005	0.344	0.366	0.177	0.182	0.21	0.21	0.222	0.24
17:35	04/09/2005	0.325	0.355	0.177	0.182	0.21	0.211	0.222	0.24
23:35	04/09/2005	0.329	0.353	0.177	0.182	0.21	0.211	0.223	0.24
05:35	05/09/2005	0.336	0.355	0.176	0.182	0.21	0.21	0.222	0.24
11:35	05/09/2005	0.329	0.353	0.175	0.181	0.209	0.21	0.221	0.239
17:35	05/09/2005	0.316	0.346	0.176	0.182	0.21	0.211	0.223	0.24
23:35	05/09/2005	0.319	0.343	0.175	0.181	0.21	0.211	0.222	0.24
05:35	06/09/2005	0.326	0.345	0.175	0.182	0.21	0.21	0.222	0.24
11:35	06/09/2005	0.321	0.345	0.174	0.181	0.21	0.21	0.222	0.239
17:35	06/09/2005	0.306	0.337	0.175	0.182	0.211	0.211	0.223	0.241
23:35	06/09/2005	0.309	0.332	0.174	0.181	0.21	0.211	0.222	0.239
05:35	07/09/2005	0.316	0.336	0.174	0.181	0.21	0.21	0.222	0.239
11:35	07/09/2005	0.311	0.334	0.173	0.18	0.209	0.21	0.221	0.238
17:35	07/09/2005	0.3	0.328	0.173	0.181	0.21	0.211	0.223	0.24
23:35	07/09/2005	0.303	0.327	0.173	0.181	0.21	0.211	0.223	0.24
05:35	08/09/2005	0.307	0.327	0.173	0.181	0.21	0.21	0.222	0.239
11:35	08/09/2005	0.305	0.327	0.172	0.18	0.209	0.21	0.222	0.238
17:35	08/09/2005	0.296	0.323	0.173	0.181	0.211	0.211	0.223	0.24
23:35	08/09/2005	0.299	0.32	0.172	0.18	0.21	0.21	0.222	0.239
05:35	09/09/2005	0.304	0.322	0.171	0.18	0.209	0.21	0.222	0.238
11:35	09/09/2005	0.301	0.322	0.171	0.18	0.209	0.21	0.222	0.238
17:35	09/09/2005	0.294	0.318	0.172	0.181	0.21	0.21	0.223	0.239
23:35	09/09/2005	0.296	0.317	0.171	0.181	0.21	0.21	0.222	0.239
05:35	10/09/2005	0.3	0.319	0.171	0.181	0.21	0.21	0.222	0.238
11:35	10/09/2005	0.3	0.319	0.171	0.181	0.21	0.21	0.222	0.238
17:35	10/09/2005	0.295	0.318	0.171	0.181	0.211	0.21	0.223	0.239
23:35	10/09/2005	0.295	0.316	0.171	0.181	0.21	0.21	0.222	0.238
05:35	11/09/2005	0.298	0.317	0.17	0.181	0.21	0.21	0.222	0.238
11:35	11/09/2005	0.296	0.314	0.169	0.179	0.208	0.209	0.22	0.236
17:35	11/09/2005	0.29	0.315	0.171	0.182	0.211	0.211	0.223	0.239
23:35	11/09/2005	0.293	0.312	0.17	0.181	0.21	0.21	0.222	0.238
05:35	12/09/2005	0.297	0.314	0.17	0.181	0.21	0.21	0.222	0.238
11:35	12/09/2005	0.296	0.314	0.17	0.181	0.209	0.21	0.222	0.238
17:35	12/09/2005	0.294	0.314	0.17	0.181	0.21	0.21	0.222	0.238
23:35	12/09/2005	0.296	0.314	0.17	0.181	0.21	0.21	0.222	0.238
05:35	13/09/2005	0.3	0.316	0.17	0.181	0.21	0.21	0.222	0.238
11:35	13/09/2005	0.299	0.316	0.169	0.181	0.21	0.21	0.222	0.237
17:35	13/09/2005	0.289	0.312	0.17	0.182	0.211	0.21	0.222	0.238
23:35	13/09/2005	0.293	0.311	0.169	0.181	0.21	0.21	0.222	0.238
05:35	14/09/2005	0.297	0.313	0.169	0.181	0.21	0.21	0.222	0.238
11:35	14/09/2005	0.297	0.313	0.168	0.18	0.209	0.209	0.221	0.236
17:35	14/09/2005	0.292	0.313	0.169	0.181	0.211	0.21	0.222	0.238
23:35	14/09/2005	0.295	0.312	0.169	0.181	0.211	0.21	0.222	0.238
05:35	15/09/2005	0.299	0.314	0.169	0.181	0.21	0.21	0.222	0.238
11:35	15/09/2005	0.298	0.315	0.168	0.181	0.21	0.21	0.222	0.237
17:35	15/09/2005	0.291	0.314	0.17	0.183	0.212	0.211	0.223	0.239
23:35	15/09/2005	0.293	0.311	0.169	0.182	0.211	0.21	0.222	0.238
05:35	16/09/2005	0.296	0.313	0.169	0.182	0.21	0.21	0.222	0.237
11:35	16/09/2005	0.296	0.314	0.168	0.181	0.211	0.21	0.222	0.237
17:35	16/09/2005	0.292	0.313	0.169	0.182	0.211	0.211	0.222	0.238
23:35	16/09/2005	0.293	0.312	0.169	0.182	0.211	0.211	0.222	0.238
05:35	17/09/2005	0.296	0.313	0.169	0.182	0.211	0.211	0.222	0.238
11:35	17/09/2005	0.293	0.313	0.168	0.181	0.21	0.21	0.222	0.237
17:35	17/09/2005	0.284	0.31	0.17	0.183	0.212	0.211	0.223	0.239
23:35	17/09/2005	0.286	0.307	0.169	0.182	0.211	0.21	0.222	0.237
05:35	18/09/2005	0.289	0.308	0.169	0.182	0.211	0.21	0.222	0.237
11:35	18/09/2005	0.288	0.308	0.168	0.181	0.21	0.21	0.222	0.237
17:35	18/09/2005	0.279	0.305	0.169	0.182	0.212	0.211	0.223	0.238
23:35	18/09/2005	0.283	0.303	0.169	0.181	0.211	0.21	0.222	0.237
05:35	19/09/2005	0.286	0.305	0.168	0.181	0.211	0.21	0.222	0.237
11:35	19/09/2005	0.286	0.306	0.169	0.181	0.211	0.21	0.222	0.237
17:35	19/09/2005	0.282	0.304	0.168	0.182	0.211	0.21	0.222	0.237
23:35	19/09/2005	0.284	0.304	0.168	0.181	0.211	0.21	0.222	0.237

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
05:35	20/09/2005	0.287	0.305	0.169	0.181	0.211	0.21	0.222	0.237
11:35	20/09/2005	0.286	0.305	0.168	0.181	0.21	0.209	0.222	0.236
17:35	20/09/2005	0.283	0.304	0.168	0.181	0.211	0.21	0.222	0.237
23:35	20/09/2005	0.285	0.304	0.168	0.181	0.211	0.209	0.222	0.237
05:35	21/09/2005	0.288	0.305	0.168	0.181	0.211	0.209	0.222	0.237
11:35	21/09/2005	0.288	0.306	0.167	0.181	0.21	0.209	0.222	0.236
17:35	21/09/2005	0.285	0.307	0.169	0.182	0.212	0.21	0.223	0.238
23:35	21/09/2005	0.286	0.304	0.168	0.182	0.211	0.21	0.222	0.237
05:35	22/09/2005	0.288	0.306	0.168	0.181	0.21	0.209	0.222	0.236
11:35	22/09/2005	0.288	0.305	0.167	0.181	0.21	0.209	0.221	0.236
17:35	22/09/2005	0.283	0.305	0.168	0.182	0.211	0.21	0.223	0.237
23:35	22/09/2005	0.285	0.304	0.168	0.181	0.211	0.209	0.222	0.236
05:35	23/09/2005	0.29	0.306	0.168	0.181	0.211	0.209	0.222	0.236
11:35	23/09/2005	0.29	0.308	0.167	0.181	0.21	0.209	0.222	0.236
17:35	23/09/2005	0.285	0.305	0.168	0.182	0.211	0.209	0.222	0.237
23:35	23/09/2005	0.288	0.306	0.168	0.181	0.211	0.209	0.222	0.237
05:35	24/09/2005	0.29	0.307	0.168	0.181	0.211	0.209	0.222	0.236
11:35	24/09/2005	0.288	0.308	0.168	0.182	0.211	0.21	0.222	0.236
17:35	24/09/2005	0.284	0.305	0.168	0.182	0.211	0.21	0.222	0.237
23:35	24/09/2005	0.286	0.305	0.168	0.182	0.211	0.21	0.222	0.237
05:35	25/09/2005	0.287	0.306	0.168	0.182	0.211	0.21	0.222	0.237
11:35	25/09/2005	0.286	0.305	0.167	0.181	0.21	0.209	0.222	0.236
17:35	25/09/2005	0.285	0.306	0.168	0.182	0.212	0.21	0.223	0.237
23:35	25/09/2005	0.286	0.305	0.168	0.182	0.211	0.21	0.223	0.237
05:35	26/09/2005	0.289	0.306	0.167	0.181	0.211	0.209	0.222	0.236
11:35	26/09/2005	0.288	0.308	0.167	0.182	0.211	0.209	0.222	0.236
17:35	26/09/2005	0.283	0.305	0.168	0.182	0.211	0.21	0.223	0.237
23:35	26/09/2005	0.285	0.305	0.167	0.182	0.211	0.209	0.222	0.236
05:35	27/09/2005	0.289	0.307	0.168	0.182	0.211	0.209	0.222	0.236
11:35	27/09/2005	0.289	0.308	0.167	0.181	0.211	0.209	0.222	0.236
17:35	27/09/2005	0.283	0.306	0.168	0.182	0.212	0.21	0.223	0.237
23:35	27/09/2005	0.286	0.305	0.168	0.182	0.211	0.21	0.222	0.236
05:35	28/09/2005	0.291	0.307	0.167	0.181	0.211	0.209	0.222	0.236
11:35	28/09/2005	0.291	0.308	0.166	0.181	0.21	0.209	0.221	0.235
17:35	28/09/2005	0.289	0.309	0.167	0.182	0.211	0.21	0.222	0.236
23:35	28/09/2005	0.288	0.308	0.167	0.182	0.211	0.21	0.222	0.236
05:35	29/09/2005	0.288	0.308	0.167	0.182	0.211	0.21	0.222	0.236
11:35	29/09/2005	0.287	0.307	0.167	0.182	0.211	0.209	0.222	0.236
17:35	29/09/2005	0.282	0.305	0.167	0.182	0.212	0.21	0.223	0.237
23:35	29/09/2005	0.285	0.304	0.167	0.182	0.211	0.209	0.222	0.236
05:35	30/09/2005	0.287	0.306	0.167	0.182	0.211	0.209	0.222	0.236
11:35	30/09/2005	0.287	0.306	0.167	0.181	0.21	0.209	0.222	0.235
17:35	30/09/2005	0.285	0.307	0.167	0.182	0.211	0.21	0.223	0.236
23:35	30/09/2005	0.288	0.306	0.167	0.181	0.211	0.209	0.222	0.236
05:35	01/10/2005	0.291	0.308	0.166	0.181	0.211	0.209	0.222	0.235
11:35	01/10/2005	0.291	0.308	0.166	0.181	0.21	0.209	0.222	0.234
17:35	01/10/2005	0.287	0.308	0.167	0.182	0.211	0.21	0.223	0.236
23:35	01/10/2005	0.289	0.307	0.166	0.181	0.211	0.209	0.222	0.235
05:35	02/10/2005	0.29	0.308	0.166	0.181	0.211	0.209	0.222	0.235
11:35	02/10/2005	0.29	0.308	0.166	0.181	0.21	0.209	0.222	0.235
17:35	02/10/2005	0.288	0.309	0.166	0.181	0.211	0.21	0.223	0.236
23:35	02/10/2005	0.291	0.309	0.166	0.182	0.211	0.21	0.223	0.236
05:35	03/10/2005	0.294	0.311	0.166	0.181	0.211	0.21	0.222	0.236
11:35	03/10/2005	0.295	0.312	0.166	0.181	0.211	0.21	0.222	0.235
17:35	03/10/2005	0.289	0.311	0.167	0.182	0.212	0.211	0.223	0.237
23:35	03/10/2005	0.291	0.31	0.166	0.181	0.211	0.21	0.223	0.236
05:35	04/10/2005	0.294	0.312	0.166	0.181	0.211	0.21	0.223	0.236
11:35	04/10/2005	0.293	0.312	0.165	0.181	0.21	0.21	0.222	0.235
17:35	04/10/2005	0.287	0.31	0.166	0.182	0.212	0.211	0.223	0.236
23:35	04/10/2005	0.289	0.309	0.166	0.181	0.211	0.21	0.223	0.236
05:35	05/10/2005	0.291	0.31	0.166	0.181	0.211	0.21	0.223	0.235
11:35	05/10/2005	0.291	0.31	0.165	0.181	0.21	0.21	0.222	0.235
17:35	05/10/2005	0.286	0.31	0.166	0.182	0.212	0.211	0.223	0.236
23:35	05/10/2005	0.288	0.308	0.166	0.181	0.211	0.21	0.223	0.235
05:35	06/10/2005	0.29	0.309	0.165	0.181	0.211	0.21	0.223	0.235
11:35	06/10/2005	0.29	0.309	0.165	0.181	0.211	0.21	0.222	0.235
17:35	06/10/2005	0.285	0.308	0.166	0.182	0.212	0.211	0.223	0.236
23:35	06/10/2005	0.286	0.307	0.165	0.181	0.211	0.21	0.223	0.235
05:35	07/10/2005	0.288	0.308	0.165	0.181	0.211	0.21	0.223	0.235
11:35	07/10/2005	0.287	0.306	0.165	0.18	0.21	0.21	0.222	0.234
17:35	07/10/2005	0.284	0.307	0.166	0.181	0.211	0.21	0.223	0.236

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
23:35	07/10/2005	0.285	0.306	0.166	0.181	0.211	0.21	0.223	0.235
05:35	08/10/2005	0.285	0.306	0.166	0.181	0.211	0.21	0.223	0.235
11:35	08/10/2005	0.285	0.306	0.165	0.181	0.211	0.21	0.223	0.235
17:35	08/10/2005	0.283	0.306	0.167	0.182	0.212	0.211	0.224	0.236
23:35	08/10/2005	0.285	0.305	0.166	0.181	0.211	0.21	0.223	0.235
05:35	09/10/2005	0.289	0.307	0.166	0.181	0.211	0.21	0.223	0.235
11:35	09/10/2005	0.288	0.307	0.165	0.181	0.21	0.21	0.223	0.234
17:35	09/10/2005	0.283	0.307	0.166	0.182	0.212	0.211	0.224	0.236
23:35	09/10/2005	0.284	0.305	0.165	0.181	0.211	0.21	0.223	0.235
05:35	10/10/2005	0.285	0.305	0.165	0.181	0.21	0.21	0.223	0.234
11:35	10/10/2005	0.285	0.305	0.165	0.181	0.211	0.21	0.223	0.235
17:35	10/10/2005	0.283	0.305	0.166	0.181	0.211	0.21	0.223	0.235
23:35	10/10/2005	0.284	0.305	0.166	0.181	0.211	0.21	0.224	0.235
05:35	11/10/2005	0.285	0.305	0.166	0.181	0.211	0.21	0.223	0.235
11:35	11/10/2005	0.285	0.305	0.165	0.181	0.211	0.21	0.223	0.234
17:35	11/10/2005	0.281	0.304	0.166	0.182	0.212	0.21	0.224	0.236
23:35	11/10/2005	0.283	0.303	0.166	0.181	0.211	0.21	0.223	0.235
05:35	12/10/2005	0.286	0.304	0.166	0.181	0.211	0.21	0.223	0.235
11:35	12/10/2005	0.286	0.304	0.165	0.18	0.21	0.209	0.223	0.234
17:35	12/10/2005	0.284	0.306	0.166	0.181	0.212	0.21	0.224	0.236
23:35	12/10/2005	0.284	0.304	0.165	0.181	0.211	0.21	0.223	0.235
05:35	13/10/2005	0.284	0.304	0.165	0.181	0.211	0.21	0.223	0.235
11:35	13/10/2005	0.283	0.302	0.164	0.18	0.21	0.209	0.222	0.234
17:35	13/10/2005	0.282	0.304	0.166	0.182	0.212	0.21	0.224	0.236
23:35	13/10/2005	0.283	0.303	0.166	0.181	0.211	0.21	0.223	0.235
05:35	14/10/2005	0.285	0.304	0.165	0.181	0.211	0.21	0.223	0.235
11:35	14/10/2005	0.285	0.304	0.165	0.18	0.21	0.209	0.223	0.234
17:35	14/10/2005	0.281	0.305	0.166	0.182	0.212	0.211	0.224	0.236
23:35	14/10/2005	0.283	0.303	0.165	0.181	0.211	0.21	0.223	0.235
05:35	15/10/2005	0.285	0.303	0.165	0.181	0.21	0.209	0.223	0.234
11:35	15/10/2005	0.284	0.304	0.165	0.18	0.21	0.209	0.223	0.234
17:35	15/10/2005	0.283	0.304	0.165	0.181	0.211	0.21	0.223	0.235
23:35	15/10/2005	0.282	0.303	0.165	0.181	0.211	0.21	0.223	0.235
05:35	16/10/2005	0.283	0.303	0.165	0.181	0.211	0.21	0.223	0.234
11:35	16/10/2005	0.284	0.303	0.165	0.18	0.21	0.209	0.223	0.234
17:35	16/10/2005	0.283	0.304	0.166	0.181	0.212	0.21	0.224	0.235
23:35	16/10/2005	0.285	0.303	0.165	0.181	0.211	0.21	0.223	0.235
05:35	17/10/2005	0.286	0.305	0.165	0.18	0.21	0.209	0.223	0.234
11:35	17/10/2005	0.286	0.304	0.164	0.18	0.21	0.209	0.223	0.234
17:35	17/10/2005	0.284	0.305	0.165	0.181	0.211	0.21	0.223	0.235
23:35	17/10/2005	0.286	0.304	0.164	0.18	0.21	0.21	0.223	0.234
05:35	18/10/2005	0.288	0.306	0.164	0.18	0.21	0.21	0.223	0.234
11:35	18/10/2005	0.288	0.306	0.164	0.18	0.21	0.21	0.223	0.234
17:35	18/10/2005	0.284	0.306	0.165	0.181	0.211	0.21	0.224	0.235
23:35	18/10/2005	0.284	0.304	0.164	0.18	0.211	0.21	0.223	0.234
05:35	19/10/2005	0.286	0.304	0.164	0.18	0.21	0.21	0.223	0.234
11:35	19/10/2005	0.285	0.303	0.163	0.179	0.209	0.209	0.222	0.233
17:35	19/10/2005	0.284	0.305	0.164	0.18	0.211	0.21	0.224	0.235
23:35	19/10/2005	0.284	0.304	0.164	0.18	0.211	0.21	0.223	0.234
05:35	20/10/2005	0.285	0.304	0.164	0.18	0.211	0.21	0.223	0.235
11:35	20/10/2005	0.285	0.304	0.163	0.18	0.21	0.21	0.223	0.234
17:35	20/10/2005	0.284	0.305	0.164	0.18	0.211	0.21	0.224	0.235
23:35	20/10/2005	0.286	0.304	0.164	0.18	0.21	0.21	0.223	0.234
05:35	21/10/2005	0.288	0.306	0.164	0.18	0.211	0.21	0.223	0.234
11:35	21/10/2005	0.288	0.306	0.163	0.18	0.21	0.21	0.222	0.233
17:35	21/10/2005	0.284	0.306	0.165	0.181	0.212	0.211	0.224	0.236
23:35	21/10/2005	0.287	0.306	0.164	0.18	0.211	0.21	0.223	0.234
05:35	22/10/2005	0.288	0.307	0.164	0.18	0.211	0.21	0.223	0.234
11:35	22/10/2005	0.287	0.305	0.162	0.179	0.209	0.209	0.222	0.233
17:35	22/10/2005	0.285	0.307	0.164	0.18	0.211	0.211	0.224	0.235
23:35	22/10/2005	0.286	0.306	0.163	0.18	0.21	0.21	0.224	0.234
05:35	23/10/2005	0.287	0.306	0.163	0.18	0.21	0.21	0.223	0.234
11:35	23/10/2005	0.286	0.306	0.163	0.179	0.21	0.21	0.223	0.233
17:35	23/10/2005	0.283	0.305	0.163	0.18	0.211	0.211	0.224	0.235
23:35	23/10/2005	0.284	0.305	0.164	0.18	0.211	0.21	0.224	0.234
05:35	24/10/2005	0.285	0.305	0.163	0.18	0.211	0.21	0.224	0.234
11:35	24/10/2005	0.285	0.305	0.163	0.18	0.21	0.21	0.223	0.234
17:35	24/10/2005	0.284	0.306	0.164	0.181	0.212	0.211	0.225	0.236
23:35	24/10/2005	0.284	0.304	0.164	0.18	0.211	0.21	0.224	0.234
05:35	25/10/2005	0.285	0.305	0.164	0.18	0.211	0.21	0.224	0.234
11:35	25/10/2005	0.284	0.303	0.163	0.179	0.209	0.21	0.222	0.233

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
17:35	25/10/2005	0.281	0.305	0.164	0.181	0.211	0.211	0.224	0.235
23:35	25/10/2005	0.281	0.303	0.164	0.18	0.211	0.21	0.224	0.235
05:35	26/10/2005	0.282	0.303	0.164	0.18	0.21	0.21	0.224	0.234
11:35	26/10/2005	0.282	0.303	0.163	0.18	0.21	0.21	0.223	0.234
17:35	26/10/2005	0.279	0.302	0.164	0.18	0.211	0.21	0.224	0.235
23:35	26/10/2005	0.281	0.302	0.164	0.18	0.211	0.21	0.224	0.234
05:35	27/10/2005	0.283	0.303	0.164	0.18	0.211	0.21	0.224	0.234
11:35	27/10/2005	0.284	0.303	0.163	0.18	0.21	0.209	0.223	0.233
17:35	27/10/2005	0.282	0.304	0.165	0.181	0.212	0.211	0.225	0.236
23:35	27/10/2005	0.284	0.303	0.164	0.18	0.211	0.21	0.224	0.234
05:35	28/10/2005	0.286	0.304	0.164	0.18	0.21	0.21	0.224	0.234
11:35	28/10/2005	0.287	0.304	0.163	0.18	0.21	0.21	0.223	0.233
17:35	28/10/2005	0.283	0.305	0.164	0.181	0.212	0.211	0.225	0.235
23:35	28/10/2005	0.285	0.304	0.164	0.18	0.211	0.21	0.224	0.234
05:35	29/10/2005	0.285	0.304	0.163	0.179	0.21	0.209	0.223	0.233
11:35	29/10/2005	0.286	0.305	0.163	0.179	0.21	0.21	0.223	0.233
17:35	29/10/2005	0.284	0.306	0.164	0.181	0.211	0.211	0.225	0.235
23:35	29/10/2005	0.284	0.304	0.163	0.18	0.21	0.21	0.224	0.234
05:35	30/10/2005	0.286	0.305	0.163	0.18	0.21	0.21	0.224	0.234
11:35	30/10/2005	0.286	0.305	0.163	0.18	0.21	0.21	0.224	0.234
17:35	30/10/2005	0.284	0.305	0.164	0.18	0.211	0.211	0.224	0.235
23:35	30/10/2005	0.285	0.304	0.163	0.18	0.21	0.21	0.224	0.234
05:35	31/10/2005	0.287	0.305	0.163	0.18	0.21	0.21	0.224	0.234
11:35	31/10/2005	0.287	0.305	0.162	0.179	0.21	0.21	0.223	0.233
17:35	31/10/2005	0.284	0.305	0.163	0.18	0.211	0.211	0.224	0.235
23:35	31/10/2005	0.285	0.304	0.162	0.179	0.21	0.21	0.223	0.233
559	01/11/2005	0.286	0.305	0.163	0.179	0.21	0.21	0.224	0.234
1159	01/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1759	01/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
2359	01/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
559	02/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	02/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.223	0.233
1759	02/11/2005	0.284	0.305	0.163	0.179	0.21	0.21	0.224	0.234
2359	02/11/2005	0.285	0.305	0.163	0.179	0.21	0.21	0.224	0.234
559	03/11/2005	0.285	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	03/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1759	03/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
2359	03/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
559	04/11/2005	0.285	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	04/11/2005	0.285	0.305	0.162	0.179	0.21	0.21	0.224	0.233
1759	04/11/2005	0.285	0.305	0.162	0.179	0.21	0.21	0.224	0.234
2359	04/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
559	05/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	05/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1759	05/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
2359	05/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
559	06/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	06/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.233
1759	06/11/2005	0.286	0.306	0.162	0.179	0.211	0.211	0.224	0.234
2359	06/11/2005	0.287	0.305	0.162	0.179	0.21	0.21	0.224	0.234
559	07/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.233
1159	07/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.233
1759	07/11/2005	0.286	0.306	0.162	0.179	0.21	0.21	0.224	0.234
2359	07/11/2005	0.287	0.306	0.162	0.179	0.21	0.21	0.224	0.234
559	08/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	08/11/2005	0.286	0.305	0.162	0.179	0.21	0.21	0.224	0.233
1759	08/11/2005	0.287	0.306	0.162	0.179	0.211	0.211	0.225	0.234
2359	08/11/2005	0.286	0.306	0.162	0.179	0.21	0.21	0.224	0.234
559	09/11/2005	0.285	0.305	0.162	0.179	0.21	0.21	0.224	0.234
1159	09/11/2005	0.285	0.304	0.161	0.178	0.209	0.21	0.224	0.233
1759	09/11/2005	0.285	0.305	0.162	0.179	0.21	0.21	0.224	0.234
2359	09/11/2005	0.285	0.305	0.161	0.179	0.21	0.21	0.224	0.234
559	10/11/2005	0.284	0.305	0.161	0.178	0.209	0.21	0.224	0.233
1159	10/11/2005	0.284	0.305	0.161	0.178	0.209	0.21	0.224	0.233
1759	10/11/2005	0.284	0.306	0.162	0.179	0.211	0.211	0.225	0.234
2359	10/11/2005	0.283	0.304	0.162	0.179	0.21	0.211	0.225	0.234
559	11/11/2005	0.284	0.304	0.161	0.179	0.21	0.21	0.224	0.234
1159	11/11/2005	0.285	0.304	0.161	0.178	0.21	0.21	0.224	0.234
1759	11/11/2005	0.285	0.306	0.162	0.179	0.211	0.211	0.225	0.235
2359	11/11/2005	0.286	0.305	0.161	0.179	0.21	0.211	0.225	0.234
559	12/11/2005	0.286	0.306	0.161	0.179	0.21	0.211	0.225	0.234

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	12/11/2005	0.285	0.305	0.161	0.179	0.21	0.21	0.224	0.233
1759	12/11/2005	0.284	0.306	0.162	0.179	0.211	0.211	0.225	0.235
2359	12/11/2005	0.282	0.304	0.161	0.178	0.21	0.21	0.224	0.234
559	13/11/2005	0.279	0.304	0.161	0.179	0.21	0.211	0.224	0.234
1159	13/11/2005	0.275	0.303	0.161	0.178	0.21	0.21	0.224	0.234
1759	13/11/2005	0.272	0.303	0.161	0.179	0.21	0.21	0.224	0.234
2359	13/11/2005	0.268	0.303	0.161	0.178	0.21	0.21	0.224	0.234
559	14/11/2005	0.265	0.302	0.161	0.179	0.21	0.211	0.225	0.234
1159	14/11/2005	0.26	0.301	0.161	0.178	0.21	0.21	0.224	0.234
1759	14/11/2005	0.255	0.302	0.162	0.18	0.211	0.211	0.225	0.235
2359	14/11/2005	0.247	0.299	0.161	0.179	0.21	0.211	0.225	0.234
559	15/11/2005	0.235	0.298	0.161	0.178	0.21	0.211	0.224	0.234
1159	15/11/2005	0.22	0.295	0.16	0.178	0.209	0.21	0.224	0.233
1759	15/11/2005	0.21	0.293	0.161	0.179	0.21	0.211	0.225	0.234
2359	15/11/2005	0.201	0.29	0.16	0.178	0.21	0.211	0.225	0.234
559	16/11/2005	0.192	0.285	0.16	0.178	0.21	0.21	0.224	0.234
1159	16/11/2005	0.185	0.278	0.16	0.178	0.209	0.21	0.224	0.233
1759	16/11/2005	0.182	0.274	0.16	0.178	0.21	0.211	0.224	0.234
2359	16/11/2005	0.18	0.269	0.16	0.178	0.21	0.21	0.224	0.233
559	17/11/2005	0.179	0.265	0.16	0.178	0.21	0.211	0.224	0.234
1159	17/11/2005	0.178	0.261	0.159	0.177	0.209	0.21	0.224	0.233
1759	17/11/2005	0.178	0.258	0.159	0.178	0.21	0.211	0.224	0.234
2359	17/11/2005	0.18	0.257	0.16	0.178	0.21	0.211	0.225	0.234
559	18/11/2005	0.182	0.256	0.159	0.178	0.209	0.21	0.224	0.233
1159	18/11/2005	0.184	0.258	0.159	0.178	0.21	0.211	0.225	0.234
1759	18/11/2005	0.187	0.259	0.159	0.178	0.21	0.211	0.225	0.234
2359	18/11/2005	0.189	0.26	0.159	0.178	0.21	0.211	0.225	0.234
559	19/11/2005	0.191	0.262	0.159	0.178	0.21	0.211	0.224	0.234
1159	19/11/2005	0.193	0.263	0.159	0.178	0.209	0.21	0.224	0.233
1759	19/11/2005	0.195	0.266	0.159	0.179	0.211	0.211	0.225	0.235
2359	19/11/2005	0.197	0.266	0.159	0.178	0.21	0.211	0.225	0.234
559	20/11/2005	0.198	0.267	0.159	0.178	0.21	0.211	0.225	0.234
1159	20/11/2005	0.2	0.267	0.159	0.177	0.209	0.21	0.224	0.233
1759	20/11/2005	0.202	0.269	0.159	0.178	0.21	0.211	0.225	0.234
2359	20/11/2005	0.204	0.269	0.159	0.178	0.21	0.211	0.225	0.234
559	21/11/2005	0.206	0.269	0.159	0.178	0.209	0.21	0.224	0.234
1159	21/11/2005	0.208	0.27	0.159	0.178	0.209	0.21	0.224	0.234
1759	21/11/2005	0.21	0.271	0.159	0.178	0.209	0.21	0.225	0.234
2359	21/11/2005	0.212	0.272	0.159	0.178	0.209	0.21	0.224	0.234
559	22/11/2005	0.214	0.273	0.159	0.178	0.21	0.211	0.225	0.234
1159	22/11/2005	0.216	0.273	0.159	0.177	0.209	0.21	0.224	0.234
1759	22/11/2005	0.218	0.274	0.159	0.178	0.21	0.211	0.225	0.234
2359	22/11/2005	0.22	0.275	0.159	0.178	0.209	0.211	0.225	0.234
559	23/11/2005	0.222	0.276	0.159	0.178	0.209	0.21	0.225	0.234
1159	23/11/2005	0.224	0.276	0.159	0.178	0.209	0.21	0.225	0.234
1759	23/11/2005	0.226	0.276	0.159	0.178	0.209	0.21	0.225	0.234
2359	23/11/2005	0.228	0.277	0.159	0.178	0.209	0.21	0.225	0.234
559	24/11/2005	0.23	0.277	0.159	0.178	0.209	0.21	0.225	0.234
1159	24/11/2005	0.231	0.278	0.159	0.177	0.209	0.21	0.224	0.234
1759	24/11/2005	0.233	0.279	0.159	0.178	0.21	0.211	0.225	0.234
2359	24/11/2005	0.235	0.279	0.159	0.178	0.209	0.211	0.225	0.234
559	25/11/2005	0.236	0.279	0.159	0.178	0.209	0.21	0.225	0.234
1159	25/11/2005	0.237	0.279	0.159	0.178	0.209	0.21	0.225	0.234
1759	25/11/2005	0.238	0.28	0.159	0.178	0.209	0.21	0.225	0.234
2359	25/11/2005	0.236	0.279	0.159	0.178	0.21	0.21	0.225	0.234
559	26/11/2005	0.227	0.279	0.16	0.178	0.21	0.211	0.225	0.234
1159	26/11/2005	0.211	0.277	0.159	0.178	0.209	0.211	0.225	0.234
1759	26/11/2005	0.204	0.276	0.159	0.178	0.21	0.211	0.225	0.234
2359	26/11/2005	0.192	0.273	0.159	0.178	0.21	0.211	0.225	0.234
559	27/11/2005	0.176	0.27	0.159	0.178	0.21	0.211	0.225	0.234
1159	27/11/2005	0.166	0.265	0.158	0.177	0.209	0.21	0.224	0.233
1759	27/11/2005	0.167	0.26	0.159	0.178	0.21	0.211	0.225	0.234
2359	27/11/2005	0.165	0.252	0.159	0.177	0.21	0.211	0.225	0.234
559	28/11/2005	0.162	0.242	0.158	0.177	0.21	0.211	0.225	0.234
1159	28/11/2005	0.16	0.23	0.158	0.177	0.21	0.211	0.225	0.234
1759	28/11/2005	0.158	0.216	0.158	0.177	0.21	0.211	0.225	0.234
2359	28/11/2005	0.156	0.199	0.157	0.177	0.21	0.211	0.225	0.234
559	29/11/2005	0.154	0.184	0.157	0.177	0.21	0.211	0.225	0.234
1159	29/11/2005	0.153	0.176	0.156	0.177	0.21	0.21	0.225	0.234
1759	29/11/2005	0.153	0.173	0.155	0.177	0.21	0.211	0.225	0.234
2359	29/11/2005	0.153	0.17	0.153	0.177	0.21	0.211	0.225	0.234

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
559	30/11/2005	0.152	0.168	0.15	0.177	0.21	0.211	0.225	0.234
1159	30/11/2005	0.151	0.166	0.144	0.176	0.209	0.21	0.224	0.234
1759	30/11/2005	0.151	0.166	0.134	0.176	0.209	0.211	0.225	0.234
2359	30/11/2005	0.151	0.165	0.124	0.176	0.209	0.211	0.225	0.234
559	01/12/2005	0.151	0.165	0.118	0.175	0.209	0.211	0.225	0.234
1159	01/12/2005	0.151	0.164	0.114	0.175	0.209	0.211	0.225	0.234
1759	01/12/2005	0.151	0.164	0.112	0.174	0.209	0.211	0.225	0.234
2359	01/12/2005	0.151	0.164	0.11	0.172	0.208	0.211	0.225	0.234
559	02/12/2005	0.15	0.163	0.108	0.171	0.208	0.211	0.225	0.234
1159	02/12/2005	0.15	0.162	0.107	0.168	0.207	0.21	0.225	0.234
1759	02/12/2005	0.15	0.162	0.106	0.164	0.207	0.211	0.225	0.234
2359	02/12/2005	0.149	0.161	0.105	0.159	0.206	0.211	0.225	0.234
559	03/12/2005	0.149	0.161	0.104	0.153	0.205	0.211	0.225	0.234
1159	03/12/2005	0.149	0.161	0.103	0.147	0.204	0.211	0.225	0.234
1759	03/12/2005	0.149	0.161	0.102	0.142	0.202	0.211	0.225	0.234
2359	03/12/2005	0.149	0.161	0.102	0.137	0.2	0.211	0.225	0.234
559	04/12/2005	0.149	0.161	0.101	0.133	0.198	0.211	0.225	0.234
1159	04/12/2005	0.149	0.161	0.101	0.13	0.195	0.21	0.225	0.234
1759	04/12/2005	0.149	0.161	0.1	0.127	0.192	0.21	0.225	0.234
2359	04/12/2005	0.148	0.16	0.1	0.125	0.19	0.211	0.225	0.235
559	05/12/2005	0.146	0.158	0.099	0.123	0.187	0.21	0.225	0.234
1159	05/12/2005	0.145	0.157	0.097	0.12	0.184	0.21	0.225	0.234
1759	05/12/2005	0.145	0.156	0.096	0.118	0.181	0.21	0.225	0.234
2359	05/12/2005	0.145	0.156	0.095	0.115	0.177	0.21	0.225	0.234
559	06/12/2005	0.144	0.155	0.094	0.113	0.172	0.21	0.225	0.234
1159	06/12/2005	0.143	0.154	0.092	0.111	0.168	0.21	0.225	0.234
1759	06/12/2005	0.143	0.154	0.091	0.108	0.163	0.21	0.225	0.234
2359	06/12/2005	0.143	0.154	0.09	0.106	0.159	0.21	0.225	0.234
559	07/12/2005	0.142	0.153	0.089	0.104	0.154	0.21	0.225	0.234
1159	07/12/2005	0.142	0.152	0.087	0.101	0.149	0.21	0.224	0.233
1759	07/12/2005	0.142	0.153	0.087	0.099	0.146	0.21	0.225	0.234
2359	07/12/2005	0.143	0.153	0.086	0.098	0.142	0.21	0.225	0.234
559	08/12/2005	0.144	0.154	0.087	0.097	0.14	0.21	0.226	0.235
1159	08/12/2005	0.145	0.155	0.087	0.096	0.137	0.21	0.225	0.234
1759	08/12/2005	0.145	0.155	0.087	0.096	0.136	0.21	0.225	0.234
2359	08/12/2005	0.145	0.155	0.087	0.095	0.135	0.21	0.225	0.234
559	09/12/2005	0.147	0.156	0.087	0.095	0.134	0.21	0.225	0.234
1159	09/12/2005	0.153	0.159	0.087	0.095	0.133	0.21	0.225	0.234
1759	09/12/2005	0.157	0.162	0.088	0.096	0.134	0.21	0.225	0.234
2359	09/12/2005	0.16	0.164	0.089	0.096	0.135	0.21	0.225	0.235
559	10/12/2005	0.161	0.166	0.09	0.097	0.135	0.21	0.225	0.234
1159	10/12/2005	0.162	0.167	0.091	0.098	0.136	0.21	0.225	0.234
1759	10/12/2005	0.163	0.168	0.092	0.098	0.137	0.21	0.225	0.234
2359	10/12/2005	0.164	0.169	0.093	0.099	0.137	0.21	0.225	0.235
559	11/12/2005	0.165	0.169	0.093	0.1	0.138	0.21	0.225	0.234
1159	11/12/2005	0.166	0.17	0.094	0.1	0.139	0.21	0.225	0.234
1759	11/12/2005	0.166	0.171	0.094	0.101	0.14	0.21	0.226	0.235
2359	11/12/2005	0.163	0.17	0.095	0.102	0.14	0.21	0.225	0.235
559	12/12/2005	0.158	0.168	0.094	0.102	0.14	0.21	0.225	0.234
1159	12/12/2005	0.154	0.165	0.094	0.102	0.141	0.21	0.225	0.234
1759	12/12/2005	0.155	0.164	0.094	0.102	0.141	0.21	0.226	0.235
2359	12/12/2005	0.154	0.163	0.093	0.101	0.141	0.21	0.225	0.234
559	13/12/2005	0.154	0.164	0.093	0.101	0.141	0.21	0.225	0.235
1159	13/12/2005	0.154	0.163	0.093	0.101	0.14	0.21	0.225	0.234
1759	13/12/2005	0.154	0.163	0.092	0.1	0.14	0.21	0.226	0.235
2359	13/12/2005	0.154	0.163	0.092	0.1	0.14	0.21	0.225	0.234
559	14/12/2005	0.153	0.162	0.092	0.1	0.139	0.21	0.225	0.234
1159	14/12/2005	0.153	0.162	0.092	0.1	0.139	0.21	0.226	0.234
1759	14/12/2005	0.153	0.162	0.092	0.1	0.139	0.21	0.226	0.235
2359	14/12/2005	0.153	0.162	0.092	0.1	0.139	0.21	0.226	0.235
559	15/12/2005	0.152	0.161	0.091	0.099	0.138	0.21	0.225	0.234
1159	15/12/2005	0.151	0.161	0.091	0.099	0.138	0.21	0.225	0.234
1759	15/12/2005	0.151	0.161	0.09	0.098	0.138	0.21	0.226	0.235
2359	15/12/2005	0.15	0.16	0.09	0.098	0.137	0.21	0.225	0.235
559	16/12/2005	0.15	0.159	0.089	0.098	0.137	0.21	0.226	0.235
1159	16/12/2005	0.149	0.158	0.089	0.097	0.136	0.21	0.225	0.234
1759	16/12/2005	0.148	0.158	0.088	0.096	0.135	0.21	0.226	0.235
2359	16/12/2005	0.147	0.156	0.087	0.096	0.134	0.21	0.225	0.235
559	17/12/2005	0.145	0.155	0.086	0.094	0.133	0.21	0.225	0.235
1159	17/12/2005	0.144	0.153	0.085	0.093	0.132	0.209	0.225	0.234
1759	17/12/2005	0.143	0.153	0.084	0.092	0.13	0.21	0.226	0.235

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	17/12/2005	0.143	0.153	0.083	0.091	0.128	0.21	0.226	0.235
559	18/12/2005	0.143	0.153	0.083	0.09	0.126	0.209	0.226	0.235
1159	18/12/2005	0.143	0.152	0.082	0.089	0.124	0.209	0.225	0.234
1759	18/12/2005	0.143	0.153	0.082	0.088	0.123	0.209	0.226	0.235
2359	18/12/2005	0.144	0.153	0.082	0.088	0.122	0.209	0.226	0.235
559	19/12/2005	0.144	0.153	0.081	0.088	0.122	0.208	0.226	0.235
1159	19/12/2005	0.143	0.152	0.081	0.087	0.121	0.208	0.225	0.234
1759	19/12/2005	0.144	0.153	0.081	0.087	0.12	0.207	0.226	0.235
2359	19/12/2005	0.144	0.153	0.081	0.087	0.12	0.206	0.226	0.235
559	20/12/2005	0.144	0.154	0.081	0.087	0.12	0.205	0.226	0.235
1159	20/12/2005	0.144	0.153	0.081	0.087	0.12	0.202	0.225	0.234
1759	20/12/2005	0.144	0.153	0.081	0.087	0.12	0.198	0.226	0.235
2359	20/12/2005	0.143	0.152	0.08	0.086	0.119	0.194	0.225	0.234
559	21/12/2005	0.143	0.152	0.08	0.086	0.119	0.191	0.225	0.234
1159	21/12/2005	0.144	0.152	0.08	0.086	0.118	0.187	0.225	0.235
1759	21/12/2005	0.144	0.153	0.08	0.086	0.118	0.182	0.226	0.235
2359	21/12/2005	0.146	0.154	0.081	0.086	0.118	0.178	0.226	0.235
559	22/12/2005	0.146	0.154	0.081	0.086	0.118	0.175	0.226	0.235
1159	22/12/2005	0.146	0.154	0.081	0.086	0.119	0.174	0.225	0.234
1759	22/12/2005	0.146	0.154	0.081	0.086	0.119	0.173	0.226	0.235
2359	22/12/2005	0.146	0.154	0.081	0.086	0.119	0.172	0.226	0.235
559	23/12/2005	0.146	0.155	0.082	0.087	0.119	0.171	0.226	0.235
1159	23/12/2005	0.146	0.155	0.082	0.087	0.12	0.171	0.226	0.235
1759	23/12/2005	0.146	0.154	0.082	0.087	0.12	0.171	0.225	0.235
2359	23/12/2005	0.146	0.154	0.082	0.087	0.12	0.171	0.226	0.235
559	24/12/2005	0.146	0.155	0.082	0.087	0.12	0.171	0.226	0.235
1159	24/12/2005	0.145	0.154	0.082	0.087	0.12	0.171	0.225	0.234
1759	24/12/2005	0.146	0.154	0.082	0.087	0.12	0.171	0.226	0.235
2359	24/12/2005	0.146	0.154	0.081	0.087	0.119	0.17	0.225	0.234
559	25/12/2005	0.146	0.155	0.082	0.087	0.12	0.17	0.226	0.235
1159	25/12/2005	0.147	0.155	0.082	0.087	0.12	0.17	0.226	0.235
1759	25/12/2005	0.147	0.155	0.082	0.087	0.12	0.17	0.226	0.235
2359	25/12/2005	0.147	0.155	0.082	0.088	0.12	0.17	0.225	0.234
559	26/12/2005	0.147	0.155	0.082	0.088	0.12	0.17	0.226	0.235
1159	26/12/2005	0.147	0.156	0.082	0.088	0.12	0.17	0.226	0.235
1759	26/12/2005	0.147	0.156	0.083	0.088	0.121	0.17	0.226	0.235
2359	26/12/2005	0.147	0.155	0.083	0.088	0.121	0.17	0.226	0.235
559	27/12/2005	0.146	0.155	0.082	0.088	0.121	0.17	0.226	0.235
1159	27/12/2005	0.146	0.155	0.082	0.088	0.121	0.17	0.225	0.234
1759	27/12/2005	0.146	0.155	0.082	0.088	0.12	0.17	0.226	0.235
2359	27/12/2005	0.147	0.155	0.082	0.088	0.12	0.17	0.226	0.235
559	28/12/2005	0.147	0.155	0.082	0.088	0.121	0.17	0.226	0.235
1159	28/12/2005	0.147	0.155	0.082	0.088	0.12	0.17	0.225	0.234
1759	28/12/2005	0.147	0.156	0.083	0.088	0.121	0.17	0.226	0.235
2359	28/12/2005	0.147	0.156	0.083	0.088	0.121	0.17	0.226	0.235
559	29/12/2005	0.148	0.156	0.083	0.088	0.121	0.17	0.226	0.235
1159	29/12/2005	0.147	0.156	0.083	0.089	0.121	0.17	0.226	0.234
1759	29/12/2005	0.148	0.156	0.083	0.089	0.122	0.171	0.226	0.235
2359	29/12/2005	0.148	0.156	0.084	0.089	0.122	0.171	0.226	0.235
559	30/12/2005	0.148	0.156	0.083	0.089	0.122	0.171	0.226	0.235
1159	30/12/2005	0.147	0.156	0.084	0.089	0.122	0.171	0.226	0.235
1759	30/12/2005	0.147	0.156	0.084	0.089	0.122	0.172	0.226	0.235
2359	30/12/2005	0.147	0.156	0.084	0.089	0.122	0.172	0.226	0.235
559	31/12/2005	0.147	0.156	0.083	0.089	0.122	0.172	0.226	0.235
1159	31/12/2005	0.147	0.156	0.083	0.089	0.122	0.172	0.226	0.235
1759	31/12/2005	0.147	0.156	0.083	0.089	0.122	0.173	0.226	0.235
2359	31/12/2005	0.147	0.156	0.084	0.089	0.122	0.173	0.226	0.235
559	01/01/2006	0.148	0.156	0.084	0.089	0.122	0.173	0.226	0.235
1159	01/01/2006	0.148	0.156	0.084	0.089	0.122	0.173	0.226	0.235
1759	01/01/2006	0.148	0.157	0.084	0.089	0.122	0.173	0.226	0.235
2359	01/01/2006	0.149	0.157	0.084	0.09	0.122	0.174	0.226	0.235
559	02/01/2006	0.149	0.157	0.084	0.09	0.123	0.174	0.226	0.235
1159	02/01/2006	0.149	0.158	0.084	0.09	0.123	0.174	0.226	0.235
1759	02/01/2006	0.149	0.158	0.085	0.09	0.123	0.175	0.226	0.235
2359	02/01/2006	0.149	0.158	0.085	0.09	0.124	0.175	0.226	0.235
559	03/01/2006	0.149	0.158	0.085	0.091	0.124	0.176	0.226	0.235
1159	03/01/2006	0.15	0.158	0.085	0.091	0.124	0.177	0.226	0.235
1759	03/01/2006	0.149	0.158	0.085	0.091	0.125	0.177	0.226	0.235
2359	03/01/2006	0.149	0.157	0.085	0.091	0.125	0.178	0.226	0.235
559	04/01/2006	0.148	0.156	0.085	0.091	0.124	0.179	0.226	0.235
1159	04/01/2006	0.147	0.156	0.084	0.091	0.124	0.179	0.226	0.235



MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1759	04/01/2006	0.147	0.156	0.084	0.09	0.124	0.179	0.226	0.235
2359	04/01/2006	0.147	0.156	0.084	0.09	0.123	0.179	0.226	0.235
559	05/01/2006	0.147	0.156	0.084	0.089	0.123	0.179	0.226	0.235
1159	05/01/2006	0.147	0.155	0.083	0.089	0.123	0.179	0.226	0.235
1759	05/01/2006	0.146	0.155	0.083	0.089	0.122	0.178	0.226	0.235
2359	05/01/2006	0.147	0.155	0.083	0.089	0.122	0.177	0.226	0.235
559	06/01/2006	0.147	0.155	0.083	0.089	0.122	0.176	0.226	0.235
1159	06/01/2006	0.147	0.156	0.083	0.089	0.122	0.175	0.226	0.235
1759	06/01/2006	0.147	0.156	0.083	0.089	0.122	0.174	0.226	0.235
2359	06/01/2006	0.147	0.156	0.083	0.089	0.122	0.173	0.226	0.235
559	07/01/2006	0.147	0.156	0.083	0.089	0.122	0.173	0.226	0.235
1159	07/01/2006	0.147	0.156	0.083	0.089	0.122	0.172	0.226	0.235
1759	07/01/2006	0.147	0.156	0.083	0.089	0.122	0.172	0.226	0.235
2359	07/01/2006	0.147	0.156	0.083	0.089	0.122	0.172	0.226	0.235
559	08/01/2006	0.147	0.156	0.083	0.089	0.122	0.171	0.226	0.235
1159	08/01/2006	0.147	0.155	0.083	0.088	0.121	0.171	0.225	0.235
1759	08/01/2006	0.147	0.155	0.083	0.089	0.121	0.171	0.226	0.235
2359	08/01/2006	0.147	0.155	0.083	0.089	0.121	0.171	0.226	0.235
559	09/01/2006	0.147	0.155	0.083	0.089	0.121	0.17	0.226	0.236
1159	09/01/2006	0.146	0.155	0.082	0.088	0.121	0.17	0.225	0.235
1759	09/01/2006	0.147	0.155	0.082	0.088	0.121	0.17	0.226	0.236
2359	09/01/2006	0.146	0.155	0.082	0.088	0.12	0.17	0.225	0.235
559	10/01/2006	0.146	0.155	0.082	0.088	0.121	0.169	0.226	0.235
1159	10/01/2006	0.146	0.155	0.082	0.088	0.12	0.169	0.226	0.235
1759	10/01/2006	0.146	0.155	0.082	0.088	0.12	0.169	0.226	0.235
2359	10/01/2006	0.146	0.155	0.082	0.088	0.12	0.169	0.226	0.235
559	11/01/2006	0.146	0.155	0.082	0.088	0.12	0.169	0.226	0.235
1159	11/01/2006	0.146	0.155	0.082	0.088	0.12	0.168	0.226	0.235
1759	11/01/2006	0.147	0.155	0.082	0.088	0.12	0.168	0.226	0.235
2359	11/01/2006	0.147	0.155	0.082	0.088	0.12	0.168	0.226	0.235
559	12/01/2006	0.147	0.155	0.082	0.088	0.12	0.168	0.226	0.235
1159	12/01/2006	0.147	0.155	0.082	0.088	0.12	0.168	0.226	0.235
1759	12/01/2006	0.145	0.154	0.081	0.087	0.119	0.168	0.233	0.257
2359	12/01/2006	0.145	0.153	0.081	0.087	0.119	0.168	0.233	0.257
559	13/01/2006	0.145	0.154	0.081	0.087	0.119	0.168	0.232	0.257
1159	13/01/2006	0.144	0.153	0.081	0.086	0.119	0.168	0.232	0.257
1759	13/01/2006	0.144	0.153	0.081	0.086	0.119	0.168	0.232	0.257
2359	13/01/2006	0.144	0.153	0.081	0.086	0.119	0.168	0.232	0.257
559	14/01/2006	0.144	0.153	0.081	0.086	0.119	0.168	0.232	0.257
1159	14/01/2006	0.144	0.153	0.081	0.086	0.118	0.167	0.233	0.257
1759	14/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
2359	14/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
559	15/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.233	0.257
1159	15/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
1759	15/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
2359	15/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
559	16/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
1159	16/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
1759	16/01/2006	0.144	0.153	0.08	0.086	0.118	0.167	0.232	0.257
2359	16/01/2006	0.143	0.152	0.08	0.086	0.118	0.167	0.232	0.257
559	17/01/2006	0.143	0.152	0.08	0.086	0.117	0.167	0.232	0.257
1159	17/01/2006	0.143	0.152	0.079	0.085	0.117	0.167	0.232	0.257
1759	17/01/2006	0.143	0.152	0.079	0.085	0.117	0.167	0.232	0.256
2359	17/01/2006	0.143	0.152	0.079	0.085	0.117	0.167	0.232	0.256
559	18/01/2006	0.143	0.152	0.079	0.085	0.117	0.167	0.232	0.256
1159	18/01/2006	0.143	0.152	0.079	0.085	0.116	0.167	0.232	0.256
1759	18/01/2006	0.143	0.152	0.079	0.085	0.116	0.167	0.232	0.256
2359	18/01/2006	0.143	0.152	0.079	0.085	0.117	0.167	0.232	0.256
559	19/01/2006	0.143	0.152	0.079	0.085	0.116	0.167	0.232	0.256
1159	19/01/2006	0.143	0.152	0.079	0.085	0.117	0.167	0.232	0.256
1759	19/01/2006	0.143	0.152	0.079	0.085	0.116	0.167	0.232	0.256
2359	19/01/2006	0.143	0.152	0.079	0.085	0.116	0.166	0.232	0.256
559	20/01/2006	0.143	0.152	0.079	0.085	0.116	0.166	0.232	0.256
1159	20/01/2006	0.142	0.151	0.079	0.084	0.116	0.166	0.232	0.256
1759	20/01/2006	0.142	0.151	0.078	0.084	0.116	0.166	0.232	0.256
2359	20/01/2006	0.142	0.151	0.078	0.084	0.115	0.166	0.232	0.256
559	21/01/2006	0.142	0.15	0.078	0.084	0.115	0.166	0.232	0.256
1159	21/01/2006	0.141	0.15	0.077	0.083	0.114	0.166	0.232	0.256
1759	21/01/2006	0.141	0.15	0.077	0.083	0.114	0.166	0.232	0.256
2359	21/01/2006	0.141	0.15	0.077	0.082	0.113	0.166	0.232	0.256
559	22/01/2006	0.141	0.15	0.076	0.082	0.113	0.166	0.232	0.256

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	22/01/2006	0.141	0.15	0.076	0.082	0.112	0.166	0.232	0.256
1759	22/01/2006	0.141	0.15	0.076	0.082	0.112	0.166	0.232	0.256
2359	22/01/2006	0.142	0.15	0.076	0.082	0.112	0.166	0.232	0.256
559	23/01/2006	0.142	0.151	0.077	0.082	0.112	0.166	0.232	0.256
1159	23/01/2006	0.142	0.151	0.077	0.082	0.112	0.166	0.232	0.256
1759	23/01/2006	0.143	0.151	0.077	0.082	0.112	0.166	0.232	0.256
2359	23/01/2006	0.143	0.151	0.077	0.082	0.113	0.166	0.232	0.256
559	24/01/2006	0.143	0.151	0.077	0.083	0.113	0.166	0.232	0.256
1159	24/01/2006	0.142	0.151	0.077	0.083	0.113	0.166	0.232	0.256
1759	24/01/2006	0.142	0.151	0.077	0.083	0.113	0.166	0.232	0.256
2359	24/01/2006	0.142	0.151	0.077	0.083	0.113	0.166	0.232	0.256
559	25/01/2006	0.142	0.151	0.077	0.083	0.113	0.166	0.232	0.256
1159	25/01/2006	0.142	0.15	0.077	0.082	0.113	0.166	0.232	0.256
1759	25/01/2006	0.142	0.15	0.077	0.082	0.113	0.166	0.232	0.256
2359	25/01/2006	0.142	0.15	0.077	0.082	0.112	0.166	0.232	0.256
559	26/01/2006	0.142	0.15	0.077	0.082	0.112	0.166	0.232	0.256
1159	26/01/2006	0.142	0.15	0.077	0.082	0.112	0.166	0.232	0.256
1759	26/01/2006	0.142	0.15	0.077	0.082	0.112	0.166	0.232	0.256
2359	26/01/2006	0.141	0.15	0.077	0.082	0.112	0.166	0.232	0.256
559	27/01/2006	0.141	0.15	0.076	0.082	0.112	0.166	0.232	0.256
1159	27/01/2006	0.141	0.149	0.076	0.081	0.112	0.166	0.232	0.256
1759	27/01/2006	0.14	0.149	0.076	0.081	0.111	0.166	0.232	0.256
2359	27/01/2006	0.14	0.149	0.076	0.081	0.111	0.166	0.232	0.256
559	28/01/2006	0.14	0.149	0.075	0.081	0.11	0.165	0.232	0.256
1159	28/01/2006	0.14	0.149	0.075	0.081	0.11	0.165	0.232	0.256
1759	28/01/2006	0.14	0.149	0.075	0.08	0.11	0.165	0.231	0.256
2359	28/01/2006	0.14	0.149	0.075	0.08	0.109	0.165	0.231	0.256
559	29/01/2006	0.14	0.149	0.074	0.08	0.109	0.165	0.231	0.255
1159	29/01/2006	0.14	0.149	0.074	0.08	0.109	0.165	0.231	0.255
1759	29/01/2006	0.14	0.149	0.074	0.08	0.109	0.165	0.231	0.255
2359	29/01/2006	0.14	0.149	0.074	0.08	0.108	0.165	0.231	0.255
559	30/01/2006	0.14	0.149	0.075	0.08	0.109	0.165	0.231	0.255
1159	30/01/2006	0.14	0.149	0.075	0.08	0.109	0.165	0.231	0.255
1759	30/01/2006	0.14	0.149	0.074	0.08	0.109	0.165	0.231	0.255
2359	30/01/2006	0.14	0.148	0.074	0.08	0.108	0.165	0.231	0.255
559	31/01/2006	0.14	0.148	0.074	0.08	0.108	0.165	0.231	0.255
1159	31/01/2006	0.139	0.148	0.074	0.08	0.108	0.165	0.231	0.255
1759	31/01/2006	0.139	0.148	0.074	0.079	0.108	0.165	0.231	0.255
2359	31/01/2006	0.139	0.148	0.074	0.079	0.108	0.165	0.231	0.255
559	01/02/2006	0.139	0.148	0.073	0.079	0.108	0.165	0.231	0.255
1159	01/02/2006	0.139	0.148	0.074	0.079	0.107	0.165	0.231	0.255
1759	01/02/2006	0.139	0.148	0.073	0.079	0.107	0.165	0.231	0.255
2359	01/02/2006	0.139	0.148	0.073	0.079	0.107	0.165	0.231	0.255
559	02/02/2006	0.139	0.148	0.073	0.078	0.107	0.165	0.231	0.255
1159	02/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
1759	02/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
2359	02/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
559	03/02/2006	0.14	0.148	0.073	0.078	0.106	0.165	0.231	0.255
1159	03/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
1759	03/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
2359	03/02/2006	0.14	0.148	0.073	0.078	0.106	0.165	0.231	0.255
559	04/02/2006	0.14	0.148	0.073	0.078	0.106	0.165	0.231	0.255
1159	04/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
1759	04/02/2006	0.139	0.148	0.073	0.078	0.106	0.165	0.231	0.255
2359	04/02/2006	0.14	0.148	0.073	0.078	0.106	0.165	0.231	0.255
559	05/02/2006	0.14	0.148	0.073	0.078	0.106	0.165	0.231	0.255
1159	05/02/2006	0.14	0.148	0.073	0.078	0.107	0.165	0.231	0.255
1759	05/02/2006	0.14	0.148	0.074	0.079	0.107	0.165	0.231	0.255
2359	05/02/2006	0.14	0.148	0.074	0.079	0.107	0.165	0.231	0.255
559	06/02/2006	0.14	0.148	0.074	0.079	0.107	0.165	0.231	0.255
1159	06/02/2006	0.14	0.148	0.074	0.079	0.107	0.165	0.231	0.255
1759	06/02/2006	0.14	0.148	0.074	0.079	0.107	0.165	0.231	0.255
2359	06/02/2006	0.14	0.148	0.074	0.079	0.107	0.165	0.231	0.255
559	07/02/2006	0.14	0.148	0.074	0.079	0.108	0.165	0.231	0.255
1159	07/02/2006	0.14	0.148	0.074	0.079	0.108	0.165	0.231	0.254
1759	07/02/2006	0.14	0.148	0.074	0.079	0.108	0.165	0.231	0.255
2359	07/02/2006	0.14	0.148	0.074	0.079	0.108	0.165	0.231	0.254
559	08/02/2006	0.14	0.148	0.074	0.079	0.108	0.165	0.231	0.255
1159	08/02/2006	0.14	0.149	0.074	0.079	0.108	0.165	0.231	0.255
1759	08/02/2006	0.14	0.149	0.074	0.079	0.108	0.165	0.231	0.255
2359	08/02/2006	0.141	0.149	0.074	0.08	0.108	0.165	0.231	0.255

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
559	09/02/2006	0.141	0.149	0.075	0.08	0.108	0.165	0.231	0.255
1159	09/02/2006	0.141	0.149	0.075	0.08	0.109	0.165	0.231	0.255
1759	09/02/2006	0.142	0.15	0.075	0.08	0.109	0.165	0.231	0.255
2359	09/02/2006	0.142	0.15	0.075	0.08	0.109	0.165	0.231	0.255
559	10/02/2006	0.142	0.15	0.075	0.08	0.109	0.165	0.231	0.255
1159	10/02/2006	0.141	0.15	0.075	0.081	0.109	0.165	0.23	0.255
1759	10/02/2006	0.141	0.149	0.075	0.081	0.11	0.165	0.23	0.255
2359	10/02/2006	0.141	0.149	0.075	0.081	0.11	0.165	0.23	0.255
559	11/02/2006	0.141	0.149	0.075	0.081	0.109	0.165	0.23	0.254
1159	11/02/2006	0.141	0.149	0.075	0.081	0.109	0.165	0.23	0.254
1759	11/02/2006	0.141	0.149	0.075	0.08	0.109	0.165	0.23	0.254
2359	11/02/2006	0.141	0.149	0.075	0.08	0.109	0.165	0.23	0.254
559	12/02/2006	0.141	0.149	0.075	0.08	0.109	0.165	0.23	0.254
1159	12/02/2006	0.141	0.149	0.075	0.081	0.109	0.165	0.23	0.254
1759	12/02/2006	0.141	0.15	0.075	0.081	0.109	0.165	0.23	0.254
2359	12/02/2006	0.142	0.15	0.075	0.081	0.109	0.165	0.23	0.254
559	13/02/2006	0.142	0.15	0.076	0.081	0.11	0.165	0.23	0.254
1159	13/02/2006	0.144	0.151	0.076	0.081	0.11	0.165	0.23	0.254
1759	13/02/2006	0.147	0.153	0.077	0.081	0.11	0.165	0.23	0.254
2359	13/02/2006	0.147	0.153	0.078	0.082	0.111	0.165	0.23	0.254
559	14/02/2006	0.145	0.153	0.078	0.082	0.112	0.165	0.23	0.254
1159	14/02/2006	0.143	0.152	0.077	0.083	0.112	0.165	0.23	0.254
1759	14/02/2006	0.142	0.151	0.077	0.082	0.112	0.165	0.23	0.254
2359	14/02/2006	0.141	0.15	0.077	0.082	0.112	0.165	0.23	0.254
559	15/02/2006	0.14	0.149	0.076	0.082	0.111	0.165	0.23	0.254
1159	15/02/2006	0.139	0.148	0.076	0.081	0.11	0.165	0.23	0.254
1759	15/02/2006	0.139	0.148	0.075	0.08	0.11	0.165	0.23	0.254
2359	15/02/2006	0.138	0.147	0.074	0.08	0.109	0.165	0.23	0.254
559	16/02/2006	0.137	0.146	0.073	0.079	0.108	0.165	0.23	0.254
1159	16/02/2006	0.135	0.145	0.072	0.078	0.107	0.165	0.23	0.254
1759	16/02/2006	0.135	0.144	0.071	0.077	0.106	0.165	0.23	0.254
2359	16/02/2006	0.135	0.144	0.071	0.077	0.105	0.165	0.23	0.254
559	17/02/2006	0.134	0.143	0.07	0.076	0.103	0.165	0.23	0.254
1159	17/02/2006	0.134	0.143	0.069	0.075	0.102	0.165	0.23	0.254
1759	17/02/2006	0.134	0.143	0.069	0.074	0.101	0.164	0.23	0.254
2359	17/02/2006	0.134	0.143	0.068	0.074	0.1	0.164	0.23	0.254
559	18/02/2006	0.134	0.143	0.068	0.074	0.1	0.164	0.23	0.254
1159	18/02/2006	0.135	0.143	0.068	0.074	0.1	0.164	0.23	0.254
1759	18/02/2006	0.135	0.143	0.068	0.074	0.099	0.164	0.23	0.254
2359	18/02/2006	0.135	0.143	0.068	0.074	0.099	0.164	0.23	0.254
559	19/02/2006	0.136	0.144	0.068	0.074	0.099	0.164	0.23	0.254
1159	19/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.23	0.254
1759	19/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.23	0.254
2359	19/02/2006	0.137	0.144	0.069	0.074	0.1	0.164	0.23	0.254
559	20/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.23	0.254
1159	20/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.23	0.254
1759	20/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.23	0.254
2359	20/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.23	0.254
559	21/02/2006	0.136	0.144	0.069	0.074	0.101	0.164	0.23	0.254
1159	21/02/2006	0.137	0.144	0.069	0.074	0.101	0.164	0.23	0.254
1759	21/02/2006	0.137	0.145	0.07	0.075	0.101	0.164	0.23	0.253
2359	21/02/2006	0.137	0.145	0.07	0.075	0.101	0.164	0.23	0.254
559	22/02/2006	0.137	0.145	0.07	0.075	0.101	0.164	0.23	0.254
1159	22/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.23	0.253
1759	22/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.23	0.253
2359	22/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.23	0.253
559	23/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.23	0.253
1159	23/02/2006	0.136	0.144	0.069	0.075	0.101	0.164	0.229	0.253
1759	23/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.229	0.253
2359	23/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.229	0.253
559	24/02/2006	0.136	0.144	0.07	0.075	0.101	0.164	0.229	0.253
1159	24/02/2006	0.136	0.144	0.069	0.075	0.101	0.164	0.229	0.253
1759	24/02/2006	0.136	0.144	0.069	0.075	0.101	0.164	0.229	0.253
2359	24/02/2006	0.136	0.144	0.069	0.075	0.101	0.164	0.229	0.253
559	25/02/2006	0.136	0.144	0.069	0.074	0.101	0.164	0.229	0.253
1159	25/02/2006	0.136	0.144	0.069	0.074	0.101	0.164	0.229	0.253
1759	25/02/2006	0.136	0.144	0.069	0.074	0.101	0.164	0.229	0.253
2359	25/02/2006	0.136	0.144	0.069	0.074	0.101	0.164	0.229	0.253
559	26/02/2006	0.136	0.144	0.069	0.074	0.1	0.164	0.229	0.253
1159	26/02/2006	0.135	0.143	0.069	0.074	0.1	0.164	0.229	0.253
1759	26/02/2006	0.135	0.143	0.068	0.074	0.1	0.164	0.229	0.253

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	26/02/2006	0.135	0.143	0.068	0.074	0.1	0.164	0.229	0.253
559	27/02/2006	0.135	0.143	0.068	0.073	0.099	0.164	0.229	0.253
1159	27/02/2006	0.134	0.142	0.067	0.073	0.099	0.164	0.229	0.253
1759	27/02/2006	0.134	0.142	0.067	0.073	0.098	0.164	0.229	0.253
2359	27/02/2006	0.134	0.142	0.067	0.073	0.098	0.164	0.229	0.253
559	28/02/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
1159	28/02/2006	0.135	0.143	0.067	0.073	0.098	0.164	0.229	0.253
1759	28/02/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
2359	28/02/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
559	01/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
1159	01/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
1759	01/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
2359	01/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
559	02/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
1159	02/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
1759	02/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
2359	02/03/2006	0.134	0.142	0.067	0.072	0.097	0.164	0.229	0.253
559	03/03/2006	0.134	0.142	0.067	0.072	0.097	0.164	0.229	0.253
1159	03/03/2006	0.134	0.142	0.067	0.072	0.097	0.164	0.229	0.253
1759	03/03/2006	0.134	0.142	0.067	0.072	0.097	0.164	0.229	0.253
2359	03/03/2006	0.134	0.142	0.067	0.072	0.097	0.164	0.229	0.253
559	04/03/2006	0.134	0.142	0.067	0.072	0.097	0.164	0.229	0.253
1159	04/03/2006	0.135	0.142	0.067	0.072	0.097	0.164	0.229	0.253
1759	04/03/2006	0.135	0.142	0.067	0.072	0.097	0.164	0.229	0.253
2359	04/03/2006	0.135	0.143	0.067	0.072	0.097	0.164	0.229	0.253
559	05/03/2006	0.135	0.143	0.067	0.072	0.097	0.164	0.229	0.253
1159	05/03/2006	0.135	0.143	0.067	0.072	0.097	0.164	0.229	0.253
1759	05/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.229	0.253
2359	05/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.228	0.253
559	06/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.228	0.253
1159	06/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.228	0.253
1759	06/03/2006	0.135	0.143	0.067	0.072	0.098	0.164	0.228	0.253
2359	06/03/2006	0.135	0.143	0.068	0.073	0.098	0.164	0.228	0.253
559	07/03/2006	0.135	0.143	0.068	0.073	0.098	0.164	0.228	0.253
1159	07/03/2006	0.135	0.143	0.068	0.073	0.098	0.164	0.228	0.253
1759	07/03/2006	0.135	0.143	0.068	0.073	0.098	0.164	0.228	0.253
2359	07/03/2006	0.135	0.143	0.068	0.073	0.098	0.164	0.228	0.253
559	08/03/2006	0.136	0.143	0.068	0.073	0.099	0.164	0.228	0.253
1159	08/03/2006	0.136	0.144	0.068	0.073	0.099	0.164	0.228	0.253
1759	08/03/2006	0.136	0.144	0.068	0.073	0.099	0.164	0.228	0.253
2359	08/03/2006	0.136	0.144	0.068	0.074	0.099	0.164	0.228	0.253
559	09/03/2006	0.136	0.144	0.069	0.074	0.099	0.164	0.228	0.253
1159	09/03/2006	0.137	0.144	0.069	0.074	0.1	0.164	0.228	0.252
1759	09/03/2006	0.137	0.145	0.069	0.074	0.1	0.164	0.228	0.252
2359	09/03/2006	0.137	0.145	0.069	0.074	0.1	0.164	0.228	0.252
559	10/03/2006	0.138	0.145	0.07	0.075	0.101	0.164	0.228	0.252
1159	10/03/2006	0.138	0.145	0.07	0.075	0.101	0.164	0.228	0.252
1759	10/03/2006	0.138	0.145	0.07	0.075	0.102	0.164	0.228	0.252
2359	10/03/2006	0.138	0.146	0.071	0.076	0.102	0.164	0.228	0.252
559	11/03/2006	0.138	0.146	0.071	0.076	0.102	0.164	0.228	0.252
1159	11/03/2006	0.138	0.146	0.071	0.076	0.102	0.164	0.228	0.252
1759	11/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
2359	11/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
559	12/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
1159	12/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
1759	12/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
2359	12/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
559	13/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
1159	13/03/2006	0.138	0.145	0.071	0.076	0.103	0.164	0.228	0.252
1759	13/03/2006	0.137	0.145	0.071	0.076	0.102	0.164	0.228	0.252
2359	13/03/2006	0.138	0.145	0.07	0.076	0.102	0.164	0.228	0.252
559	14/03/2006	0.137	0.145	0.07	0.076	0.102	0.164	0.228	0.252
1159	14/03/2006	0.137	0.145	0.07	0.076	0.102	0.164	0.228	0.252
1759	14/03/2006	0.137	0.145	0.07	0.076	0.102	0.164	0.228	0.252
2359	14/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252
559	15/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252
1159	15/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252
1759	15/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252
2359	15/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252
559	16/03/2006	0.138	0.145	0.07	0.075	0.102	0.164	0.228	0.252
1159	16/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1759	16/03/2006	0.137	0.145	0.07	0.075	0.102	0.164	0.228	0.252
2359	16/03/2006	0.138	0.145	0.07	0.075	0.102	0.164	0.228	0.252
559	17/03/2006	0.138	0.145	0.07	0.075	0.102	0.164	0.228	0.252
1159	17/03/2006	0.138	0.145	0.07	0.075	0.102	0.164	0.228	0.252
1759	17/03/2006	0.138	0.145	0.07	0.075	0.102	0.164	0.228	0.252
2359	17/03/2006	0.138	0.145	0.07	0.076	0.102	0.164	0.228	0.252
559	18/03/2006	0.138	0.145	0.07	0.076	0.102	0.164	0.228	0.252
1159	18/03/2006	0.138	0.146	0.07	0.076	0.102	0.164	0.228	0.252
1759	18/03/2006	0.138	0.146	0.071	0.076	0.102	0.164	0.228	0.252
2359	18/03/2006	0.138	0.146	0.071	0.076	0.102	0.164	0.228	0.252
559	19/03/2006	0.138	0.146	0.071	0.076	0.102	0.164	0.228	0.252
1159	19/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
1759	19/03/2006	0.138	0.146	0.071	0.076	0.103	0.164	0.228	0.252
2359	19/03/2006	0.139	0.146	0.071	0.076	0.103	0.164	0.228	0.252
559	20/03/2006	0.139	0.147	0.072	0.076	0.103	0.164	0.228	0.252
1159	20/03/2006	0.139	0.147	0.072	0.077	0.104	0.164	0.228	0.252
1759	20/03/2006	0.139	0.147	0.072	0.077	0.104	0.164	0.228	0.252
2359	20/03/2006	0.14	0.147	0.072	0.077	0.104	0.165	0.228	0.252
559	21/03/2006	0.14	0.147	0.072	0.078	0.105	0.165	0.228	0.252
1159	21/03/2006	0.14	0.148	0.073	0.078	0.105	0.165	0.228	0.251
1759	21/03/2006	0.14	0.148	0.073	0.078	0.105	0.164	0.228	0.251
2359	21/03/2006	0.142	0.149	0.074	0.078	0.106	0.165	0.228	0.251
559	22/03/2006	0.143	0.15	0.075	0.079	0.107	0.165	0.228	0.251
1159	22/03/2006	0.143	0.15	0.075	0.08	0.107	0.165	0.228	0.251
1759	22/03/2006	0.145	0.151	0.075	0.08	0.108	0.165	0.228	0.251
2359	22/03/2006	0.148	0.153	0.076	0.08	0.108	0.165	0.228	0.251
559	23/03/2006	0.149	0.154	0.077	0.081	0.109	0.165	0.228	0.251
1159	23/03/2006	0.149	0.154	0.078	0.082	0.11	0.165	0.228	0.251
1759	23/03/2006	0.15	0.155	0.078	0.082	0.111	0.165	0.228	0.251
2359	23/03/2006	0.152	0.156	0.079	0.083	0.112	0.165	0.228	0.251
559	24/03/2006	0.153	0.157	0.08	0.084	0.113	0.165	0.228	0.251
1159	24/03/2006	0.154	0.158	0.08	0.084	0.114	0.165	0.227	0.251
1759	24/03/2006	0.154	0.159	0.081	0.085	0.115	0.165	0.228	0.251
2359	24/03/2006	0.155	0.16	0.082	0.086	0.116	0.165	0.227	0.251
559	25/03/2006	0.156	0.16	0.082	0.086	0.116	0.165	0.227	0.251
1159	25/03/2006	0.155	0.16	0.083	0.087	0.117	0.165	0.227	0.251
1759	25/03/2006	0.156	0.161	0.083	0.088	0.118	0.165	0.227	0.251
2359	25/03/2006	0.157	0.161	0.084	0.088	0.119	0.165	0.227	0.251
559	26/03/2006	0.158	0.162	0.084	0.088	0.12	0.166	0.227	0.251
1159	26/03/2006	0.158	0.163	0.085	0.089	0.12	0.166	0.227	0.251
1803	26/03/2006	0.159	0.163	0.085	0.09	0.121	0.166	0.227	0.251
2359	26/03/2006	0.159	0.164	0.086	0.09	0.122	0.166	0.227	0.251
559	27/03/2006	0.16	0.164	0.086	0.09	0.122	0.166	0.227	0.251
1159	27/03/2006	0.16	0.165	0.087	0.091	0.123	0.166	0.227	0.251
1759	27/03/2006	0.16	0.165	0.087	0.091	0.123	0.166	0.227	0.251
2359	27/03/2006	0.161	0.165	0.087	0.092	0.124	0.166	0.227	0.251
559	28/03/2006	0.16	0.166	0.088	0.092	0.125	0.166	0.227	0.251
1159	28/03/2006	0.158	0.165	0.088	0.092	0.125	0.166	0.227	0.251
1759	28/03/2006	0.159	0.165	0.088	0.093	0.126	0.166	0.227	0.251
2359	28/03/2006	0.159	0.165	0.088	0.093	0.127	0.166	0.227	0.251
559	29/03/2006	0.154	0.163	0.088	0.093	0.127	0.166	0.227	0.251
1159	29/03/2006	0.151	0.16	0.088	0.093	0.127	0.166	0.227	0.251
1759	29/03/2006	0.156	0.162	0.088	0.093	0.127	0.166	0.227	0.251
2359	29/03/2006	0.158	0.164	0.088	0.093	0.127	0.166	0.227	0.251
559	30/03/2006	0.156	0.164	0.088	0.093	0.127	0.166	0.227	0.251
1159	30/03/2006	0.156	0.163	0.088	0.094	0.128	0.166	0.227	0.251
1759	30/03/2006	0.159	0.164	0.088	0.094	0.128	0.166	0.227	0.251
2359	30/03/2006	0.16	0.165	0.089	0.094	0.128	0.166	0.227	0.251
559	31/03/2006	0.161	0.166	0.089	0.094	0.128	0.166	0.227	0.251
1159	31/03/2006	0.161	0.166	0.09	0.094	0.129	0.166	0.227	0.251
1759	31/03/2006	0.162	0.167	0.09	0.095	0.129	0.166	0.227	0.251
2359	31/03/2006	0.163	0.167	0.09	0.095	0.129	0.166	0.227	0.251
559	01/04/2006	0.164	0.168	0.091	0.095	0.13	0.166	0.227	0.251
1159	01/04/2006	0.164	0.168	0.091	0.096	0.13	0.166	0.227	0.251
1759	01/04/2006	0.165	0.168	0.091	0.096	0.131	0.167	0.227	0.251
2359	01/04/2006	0.165	0.169	0.092	0.097	0.131	0.167	0.227	0.251
559	02/04/2006	0.165	0.169	0.092	0.097	0.132	0.167	0.227	0.251
1159	02/04/2006	0.165	0.169	0.092	0.097	0.132	0.167	0.227	0.251
1759	02/04/2006	0.166	0.169	0.092	0.097	0.133	0.167	0.227	0.251
2359	02/04/2006	0.167	0.17	0.092	0.098	0.133	0.167	0.227	0.251
559	03/04/2006	0.167	0.17	0.093	0.098	0.133	0.167	0.227	0.251

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	03/04/2006	0.168	0.17	0.093	0.098	0.134	0.167	0.227	0.251
1759	03/04/2006	0.169	0.171	0.094	0.098	0.134	0.167	0.227	0.251
2359	03/04/2006	0.171	0.171	0.094	0.099	0.134	0.167	0.227	0.251
559	04/04/2006	0.172	0.172	0.094	0.099	0.135	0.167	0.227	0.251
1159	04/04/2006	0.174	0.172	0.094	0.099	0.135	0.167	0.227	0.251
1759	04/04/2006	0.177	0.173	0.095	0.1	0.136	0.167	0.227	0.251
2359	04/04/2006	0.193	0.173	0.095	0.1	0.136	0.167	0.227	0.251
559	05/04/2006	0.205	0.174	0.096	0.1	0.137	0.167	0.227	0.251
1159	05/04/2006	0.213	0.175	0.096	0.101	0.137	0.167	0.227	0.251
1759	05/04/2006	0.261	0.176	0.097	0.102	0.138	0.168	0.225	0.237
2359	05/04/2006	0.324	0.178	0.097	0.102	0.138	0.168	0.225	0.237
559	06/04/2006	0.334	0.18	0.097	0.102	0.139	0.168	0.224	0.236
1159	06/04/2006	0.34	0.181	0.097	0.102	0.139	0.168	0.224	0.236
1759	06/04/2006	0.354	0.184	0.098	0.103	0.14	0.168	0.225	0.237
2359	06/04/2006	0.368	0.189	0.098	0.103	0.14	0.168	0.225	0.237
559	07/04/2006	0.374	0.199	0.099	0.103	0.14	0.168	0.224	0.237
1159	07/04/2006	0.374	0.212	0.099	0.104	0.141	0.168	0.224	0.236
1759	07/04/2006	0.368	0.225	0.099	0.104	0.141	0.168	0.224	0.236
2359	07/04/2006	0.376	0.248	0.1	0.105	0.142	0.168	0.224	0.237
559	08/04/2006	0.382	0.265	0.101	0.105	0.142	0.168	0.224	0.237
1159	08/04/2006	0.379	0.276	0.101	0.105	0.142	0.168	0.224	0.236
1759	08/04/2006	0.365	0.293	0.102	0.106	0.143	0.168	0.225	0.237
2359	08/04/2006	0.371	0.321	0.102	0.106	0.143	0.168	0.224	0.237
559	09/04/2006	0.377	0.34	0.103	0.107	0.144	0.168	0.224	0.236
1159	09/04/2006	0.372	0.346	0.103	0.107	0.144	0.168	0.223	0.235
1759	09/04/2006	0.359	0.357	0.105	0.108	0.145	0.169	0.224	0.237
2359	09/04/2006	0.365	0.366	0.105	0.108	0.145	0.169	0.224	0.237
559	10/04/2006	0.373	0.37	0.107	0.109	0.146	0.169	0.224	0.237
1159	10/04/2006	0.371	0.372	0.108	0.11	0.147	0.169	0.224	0.236
1759	10/04/2006	0.348	0.364	0.109	0.11	0.147	0.169	0.224	0.237
2359	10/04/2006	0.354	0.363	0.115	0.111	0.148	0.169	0.225	0.237
559	11/04/2006	0.36	0.364	0.119	0.112	0.148	0.169	0.225	0.237
1159	11/04/2006	0.359	0.364	0.12	0.112	0.149	0.169	0.224	0.236
1759	11/04/2006	0.337	0.357	0.124	0.114	0.15	0.17	0.225	0.237
2359	11/04/2006	0.341	0.352	0.13	0.115	0.15	0.169	0.224	0.237
559	12/04/2006	0.349	0.355	0.135	0.116	0.151	0.17	0.224	0.237
1159	12/04/2006	0.348	0.356	0.136	0.118	0.152	0.169	0.224	0.236
1759	12/04/2006	0.332	0.35	0.14	0.12	0.153	0.17	0.225	0.237
2359	12/04/2006	0.334	0.348	0.152	0.123	0.154	0.17	0.225	0.237
559	13/04/2006	0.34	0.35	0.162	0.128	0.155	0.17	0.224	0.237
1159	13/04/2006	0.341	0.352	0.163	0.131	0.156	0.17	0.224	0.236
1759	13/04/2006	0.328	0.346	0.164	0.135	0.158	0.17	0.224	0.236
2359	13/04/2006	0.332	0.344	0.165	0.141	0.16	0.171	0.224	0.237
559	14/04/2006	0.337	0.345	0.166	0.147	0.162	0.171	0.224	0.236
1159	14/04/2006	0.336	0.347	0.166	0.152	0.166	0.171	0.224	0.236
1759	14/04/2006	0.325	0.344	0.167	0.157	0.17	0.172	0.225	0.237
2359	14/04/2006	0.325	0.339	0.167	0.167	0.174	0.172	0.224	0.237
559	15/04/2006	0.329	0.34	0.167	0.171	0.179	0.172	0.224	0.237
1159	15/04/2006	0.329	0.34	0.166	0.171	0.189	0.172	0.223	0.236
1759	15/04/2006	0.318	0.338	0.167	0.172	0.197	0.173	0.224	0.237
2359	15/04/2006	0.322	0.336	0.167	0.172	0.199	0.174	0.224	0.237
559	16/04/2006	0.33	0.338	0.167	0.172	0.2	0.175	0.224	0.237
1159	16/04/2006	0.33	0.338	0.166	0.171	0.2	0.175	0.224	0.236
1759	16/04/2006	0.328	0.341	0.167	0.172	0.201	0.177	0.225	0.237
2359	16/04/2006	0.328	0.339	0.167	0.172	0.201	0.179	0.224	0.237
559	17/04/2006	0.331	0.34	0.166	0.172	0.202	0.182	0.224	0.237
1159	17/04/2006	0.327	0.338	0.165	0.171	0.201	0.185	0.223	0.235
1759	17/04/2006	0.314	0.335	0.167	0.172	0.203	0.189	0.224	0.237
2359	17/04/2006	0.317	0.331	0.167	0.172	0.203	0.193	0.224	0.237
559	18/04/2006	0.323	0.333	0.167	0.172	0.203	0.197	0.224	0.237
1159	18/04/2006	0.322	0.334	0.166	0.172	0.203	0.202	0.224	0.236
1759	18/04/2006	0.307	0.329	0.167	0.172	0.205	0.207	0.225	0.238
2359	18/04/2006	0.309	0.325	0.167	0.172	0.204	0.209	0.224	0.237
559	19/04/2006	0.314	0.326	0.167	0.172	0.204	0.211	0.224	0.237
1159	19/04/2006	0.313	0.327	0.167	0.172	0.204	0.213	0.224	0.236
1759	19/04/2006	0.302	0.323	0.167	0.173	0.205	0.214	0.225	0.237
4	20/04/2006	0.302	0.319	0.167	0.172	0.204	0.214	0.224	0.236
559	20/04/2006	0.306	0.32	0.167	0.172	0.205	0.215	0.224	0.237
1159	20/04/2006	0.304	0.32	0.166	0.172	0.204	0.215	0.224	0.236
1759	20/04/2006	0.293	0.315	0.167	0.173	0.205	0.216	0.224	0.237
2359	20/04/2006	0.294	0.312	0.167	0.173	0.205	0.216	0.225	0.237

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
559	21/04/2006	0.298	0.313	0.167	0.173	0.205	0.216	0.224	0.237
1159	21/04/2006	0.298	0.312	0.166	0.172	0.204	0.215	0.223	0.236
1759	21/04/2006	0.292	0.311	0.167	0.173	0.206	0.216	0.225	0.237
2359	21/04/2006	0.293	0.309	0.167	0.173	0.205	0.216	0.224	0.237
559	22/04/2006	0.297	0.309	0.166	0.172	0.205	0.216	0.224	0.236
1159	22/04/2006	0.302	0.312	0.166	0.172	0.205	0.215	0.224	0.236
1759	22/04/2006	0.302	0.315	0.166	0.173	0.205	0.216	0.224	0.236
2359	22/04/2006	0.306	0.316	0.166	0.173	0.205	0.216	0.224	0.237
559	23/04/2006	0.31	0.318	0.166	0.172	0.206	0.216	0.224	0.237
1159	23/04/2006	0.308	0.319	0.165	0.172	0.205	0.216	0.223	0.236
1759	23/04/2006	0.296	0.317	0.166	0.173	0.206	0.217	0.224	0.237
2359	23/04/2006	0.297	0.313	0.166	0.173	0.206	0.216	0.224	0.237
559	24/04/2006	0.303	0.315	0.166	0.173	0.206	0.216	0.224	0.237
1159	24/04/2006	0.301	0.315	0.166	0.172	0.205	0.216	0.223	0.236
1759	24/04/2006	0.289	0.312	0.167	0.173	0.207	0.216	0.224	0.238
2359	24/04/2006	0.291	0.309	0.167	0.173	0.207	0.217	0.225	0.238
559	25/04/2006	0.295	0.308	0.167	0.173	0.206	0.216	0.224	0.237
1159	25/04/2006	0.293	0.308	0.166	0.172	0.206	0.216	0.223	0.236
1759	25/04/2006	0.282	0.305	0.167	0.173	0.207	0.216	0.224	0.238
2359	25/04/2006	0.284	0.302	0.167	0.174	0.207	0.216	0.224	0.238
559	26/04/2006	0.288	0.302	0.167	0.173	0.206	0.216	0.224	0.237
1159	26/04/2006	0.287	0.302	0.166	0.173	0.206	0.215	0.223	0.236
1759	26/04/2006	0.277	0.299	0.167	0.174	0.207	0.216	0.224	0.238
2359	26/04/2006	0.279	0.296	0.167	0.173	0.207	0.216	0.224	0.237
559	27/04/2006	0.283	0.296	0.166	0.173	0.206	0.215	0.223	0.236
1159	27/04/2006	0.282	0.297	0.166	0.173	0.206	0.215	0.223	0.236
1759	27/04/2006	0.274	0.293	0.166	0.173	0.206	0.215	0.223	0.236
2359	27/04/2006	0.278	0.293	0.167	0.174	0.207	0.215	0.224	0.237
559	28/04/2006	0.282	0.294	0.166	0.173	0.206	0.215	0.223	0.237
1159	28/04/2006	0.282	0.295	0.166	0.173	0.206	0.215	0.223	0.236
1759	28/04/2006	0.273	0.292	0.166	0.173	0.207	0.215	0.224	0.237
2359	28/04/2006	0.274	0.291	0.167	0.174	0.208	0.216	0.224	0.238
559	29/04/2006	0.276	0.289	0.166	0.173	0.207	0.215	0.223	0.237
1159	29/04/2006	0.276	0.29	0.166	0.173	0.207	0.215	0.223	0.237
1759	29/04/2006	0.272	0.288	0.166	0.173	0.207	0.215	0.223	0.237
2359	29/04/2006	0.273	0.287	0.166	0.173	0.207	0.215	0.223	0.237
559	30/04/2006	0.276	0.288	0.165	0.173	0.207	0.214	0.223	0.237
1159	30/04/2006	0.276	0.287	0.165	0.172	0.206	0.214	0.222	0.236
1759	30/04/2006	0.272	0.287	0.166	0.173	0.207	0.215	0.223	0.237
2359	30/04/2006	0.276	0.288	0.166	0.173	0.207	0.215	0.223	0.237
05:35	01/05/2006	0.279	0.289	0.165	0.173	0.207	0.214	0.223	0.237
11:35	01/05/2006	0.279	0.289	0.164	0.172	0.206	0.214	0.222	0.235
17:35	01/05/2006	0.279	0.291	0.165	0.173	0.207	0.214	0.223	0.237
23:35	01/05/2006	0.308	0.297	0.165	0.172	0.207	0.214	0.223	0.236
05:35	02/05/2006	0.353	0.328	0.165	0.173	0.206	0.214	0.222	0.236
11:35	02/05/2006	0.368	0.354	0.166	0.172	0.206	0.214	0.222	0.236
17:35	02/05/2006	0.383	0.382	0.169	0.173	0.207	0.214	0.223	0.237
23:35	02/05/2006	0.386	0.391	0.172	0.173	0.207	0.215	0.223	0.237
05:35	03/05/2006	0.388	0.393	0.173	0.173	0.207	0.214	0.222	0.236
11:35	03/05/2006	0.383	0.396	0.174	0.173	0.207	0.214	0.222	0.236
17:35	03/05/2006	0.35	0.382	0.175	0.174	0.208	0.215	0.223	0.237
23:35	03/05/2006	0.356	0.374	0.176	0.174	0.208	0.215	0.223	0.237
05:35	04/05/2006	0.363	0.376	0.175	0.174	0.207	0.214	0.222	0.236
11:35	04/05/2006	0.357	0.373	0.174	0.174	0.207	0.214	0.221	0.235
17:35	04/05/2006	0.334	0.366	0.176	0.176	0.209	0.215	0.223	0.237
23:35	04/05/2006	0.336	0.358	0.176	0.176	0.209	0.215	0.223	0.237
05:35	05/05/2006	0.342	0.357	0.175	0.175	0.208	0.214	0.222	0.236
11:35	05/05/2006	0.337	0.355	0.174	0.175	0.207	0.214	0.221	0.235
17:35	05/05/2006	0.32	0.35	0.175	0.176	0.209	0.215	0.223	0.237
23:35	05/05/2006	0.32	0.344	0.175	0.177	0.21	0.215	0.223	0.238
05:35	06/05/2006	0.326	0.344	0.175	0.176	0.209	0.215	0.223	0.237
11:35	06/05/2006	0.321	0.341	0.173	0.176	0.208	0.214	0.221	0.236
17:35	06/05/2006	0.308	0.336	0.174	0.177	0.21	0.215	0.223	0.237
23:35	06/05/2006	0.311	0.333	0.174	0.177	0.209	0.214	0.223	0.237
05:35	07/05/2006	0.317	0.333	0.174	0.177	0.209	0.214	0.222	0.237
11:35	07/05/2006	0.314	0.334	0.174	0.177	0.209	0.214	0.222	0.237
17:35	07/05/2006	0.298	0.326	0.174	0.177	0.21	0.214	0.223	0.237
23:35	07/05/2006	0.303	0.323	0.174	0.177	0.21	0.214	0.223	0.237
05:35	08/05/2006	0.307	0.323	0.173	0.176	0.209	0.213	0.222	0.236
11:35	08/05/2006	0.308	0.328	0.174	0.178	0.211	0.215	0.223	0.238
17:35	08/05/2006	0.333	0.339	0.173	0.177	0.21	0.214	0.222	0.237

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
23:35	08/05/2006	0.368	0.379	0.176	0.177	0.209	0.214	0.222	0.236
05:35	09/05/2006	0.376	0.389	0.178	0.177	0.209	0.214	0.222	0.236
11:35	09/05/2006	0.375	0.392	0.18	0.177	0.209	0.213	0.222	0.236
17:35	09/05/2006	0.37	0.394	0.181	0.178	0.21	0.214	0.222	0.236
23:35	09/05/2006	0.371	0.392	0.182	0.179	0.21	0.214	0.222	0.236
05:35	10/05/2006	0.375	0.393	0.182	0.179	0.21	0.214	0.222	0.236
11:35	10/05/2006	0.371	0.396	0.183	0.18	0.211	0.214	0.222	0.236
17:35	10/05/2006	0.348	0.384	0.183	0.181	0.212	0.214	0.223	0.237
23:35	10/05/2006	0.348	0.374	0.182	0.18	0.211	0.214	0.222	0.236
05:35	11/05/2006	0.354	0.373	0.181	0.18	0.21	0.213	0.221	0.236
11:35	11/05/2006	0.35	0.378	0.182	0.181	0.212	0.214	0.222	0.237
17:35	11/05/2006	0.328	0.362	0.182	0.181	0.212	0.214	0.222	0.237
23:35	11/05/2006	0.331	0.355	0.181	0.181	0.212	0.214	0.222	0.237
05:35	12/05/2006	0.337	0.355	0.18	0.181	0.212	0.213	0.222	0.237
11:35	12/05/2006	0.333	0.356	0.18	0.181	0.212	0.213	0.222	0.236
17:35	12/05/2006	0.316	0.347	0.179	0.181	0.212	0.214	0.222	0.237
23:35	12/05/2006	0.317	0.34	0.178	0.18	0.212	0.213	0.222	0.236
05:35	13/05/2006	0.322	0.341	0.178	0.18	0.212	0.213	0.221	0.236
11:35	13/05/2006	0.319	0.339	0.177	0.18	0.211	0.213	0.221	0.235
17:35	13/05/2006	0.31	0.336	0.178	0.181	0.213	0.214	0.222	0.237
23:35	13/05/2006	0.311	0.332	0.177	0.18	0.212	0.213	0.222	0.236
05:35	14/05/2006	0.316	0.333	0.177	0.181	0.212	0.213	0.222	0.236
11:35	14/05/2006	0.313	0.332	0.176	0.18	0.211	0.212	0.221	0.235
17:35	14/05/2006	0.304	0.327	0.175	0.179	0.211	0.212	0.221	0.235
23:35	14/05/2006	0.312	0.331	0.177	0.18	0.212	0.213	0.222	0.236
05:35	15/05/2006	0.318	0.333	0.176	0.18	0.212	0.213	0.221	0.236
11:35	15/05/2006	0.313	0.333	0.175	0.18	0.211	0.212	0.221	0.235
17:35	15/05/2006	0.298	0.328	0.176	0.181	0.213	0.213	0.222	0.237
23:35	15/05/2006	0.302	0.323	0.176	0.18	0.212	0.213	0.222	0.236
05:35	16/05/2006	0.307	0.323	0.175	0.179	0.211	0.212	0.221	0.235
11:35	16/05/2006	0.304	0.325	0.175	0.18	0.212	0.212	0.221	0.236
17:35	16/05/2006	0.288	0.316	0.175	0.179	0.212	0.212	0.221	0.236
23:35	16/05/2006	0.293	0.315	0.175	0.18	0.213	0.213	0.222	0.237
05:35	17/05/2006	0.298	0.315	0.175	0.18	0.212	0.212	0.221	0.236
11:35	17/05/2006	0.296	0.314	0.174	0.179	0.211	0.212	0.22	0.235
17:35	17/05/2006	0.286	0.311	0.174	0.179	0.212	0.212	0.221	0.236
23:35	17/05/2006	0.287	0.308	0.174	0.179	0.212	0.213	0.222	0.237
05:35	18/05/2006	0.29	0.306	0.173	0.178	0.211	0.211	0.22	0.235
11:35	18/05/2006	0.287	0.306	0.173	0.178	0.211	0.212	0.22	0.235
17:35	18/05/2006	0.276	0.301	0.173	0.179	0.212	0.212	0.221	0.236
23:35	18/05/2006	0.28	0.299	0.173	0.179	0.212	0.212	0.221	0.237
05:35	19/05/2006	0.286	0.301	0.173	0.178	0.212	0.212	0.221	0.236
11:35	19/05/2006	0.285	0.301	0.172	0.178	0.211	0.212	0.221	0.236
17:35	19/05/2006	0.278	0.298	0.172	0.178	0.212	0.212	0.221	0.236
23:35	19/05/2006	0.281	0.297	0.171	0.178	0.211	0.212	0.221	0.236
05:35	20/05/2006	0.286	0.298	0.171	0.177	0.211	0.211	0.22	0.235
11:35	20/05/2006	0.287	0.3	0.171	0.178	0.211	0.212	0.221	0.236
17:35	20/05/2006	0.284	0.299	0.17	0.178	0.211	0.212	0.221	0.236
23:35	20/05/2006	0.285	0.299	0.17	0.177	0.211	0.211	0.22	0.236
05:35	21/05/2006	0.295	0.301	0.17	0.177	0.211	0.211	0.22	0.235
11:35	21/05/2006	0.35	0.337	0.17	0.177	0.211	0.211	0.22	0.235
17:35	21/05/2006	0.342	0.347	0.172	0.177	0.21	0.211	0.22	0.235
23:35	21/05/2006	0.339	0.351	0.174	0.178	0.211	0.212	0.221	0.236
05:35	22/05/2006	0.341	0.352	0.175	0.178	0.211	0.212	0.22	0.236
11:35	22/05/2006	0.332	0.349	0.175	0.178	0.211	0.211	0.22	0.234
17:35	22/05/2006	0.308	0.339	0.176	0.179	0.212	0.212	0.221	0.236
23:35	22/05/2006	0.311	0.333	0.176	0.179	0.212	0.212	0.221	0.236
05:35	23/05/2006	0.319	0.333	0.176	0.179	0.211	0.212	0.22	0.235
11:35	23/05/2006	0.316	0.333	0.175	0.178	0.211	0.211	0.22	0.235
17:35	23/05/2006	0.305	0.328	0.175	0.179	0.212	0.212	0.22	0.236
23:35	23/05/2006	0.308	0.326	0.175	0.179	0.212	0.212	0.22	0.236
05:35	24/05/2006	0.312	0.327	0.175	0.179	0.212	0.212	0.22	0.235
11:35	24/05/2006	0.316	0.329	0.175	0.179	0.212	0.212	0.22	0.235
17:35	24/05/2006	0.329	0.339	0.175	0.179	0.212	0.212	0.22	0.235
23:35	24/05/2006	0.333	0.345	0.176	0.179	0.212	0.212	0.22	0.235
05:35	25/05/2006	0.336	0.348	0.176	0.179	0.212	0.211	0.22	0.235
11:35	25/05/2006	0.337	0.351	0.176	0.179	0.212	0.212	0.22	0.235
17:35	25/05/2006	0.333	0.351	0.177	0.18	0.212	0.212	0.22	0.235
23:35	25/05/2006	0.331	0.348	0.177	0.18	0.212	0.212	0.22	0.235
05:35	26/05/2006	0.334	0.349	0.176	0.18	0.212	0.212	0.22	0.235
11:35	26/05/2006	0.333	0.349	0.176	0.179	0.212	0.212	0.219	0.234



MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
17:35	26/05/2006	0.323	0.346	0.177	0.18	0.213	0.212	0.22	0.235
23:35	26/05/2006	0.327	0.344	0.177	0.18	0.213	0.212	0.22	0.235
05:35	27/05/2006	0.331	0.343	0.175	0.179	0.211	0.211	0.219	0.233
11:35	27/05/2006	0.327	0.347	0.176	0.18	0.212	0.212	0.219	0.234
17:35	27/05/2006	0.308	0.338	0.176	0.18	0.213	0.212	0.22	0.236
23:35	27/05/2006	0.313	0.334	0.176	0.18	0.213	0.212	0.22	0.235
05:35	28/05/2006	0.319	0.334	0.175	0.179	0.211	0.211	0.219	0.234
11:35	28/05/2006	0.318	0.335	0.175	0.179	0.212	0.212	0.219	0.234
17:35	28/05/2006	0.303	0.328	0.175	0.179	0.212	0.212	0.219	0.235
23:35	28/05/2006	0.306	0.326	0.175	0.18	0.213	0.212	0.22	0.235
05:35	29/05/2006	0.31	0.327	0.175	0.179	0.212	0.211	0.22	0.235
11:35	29/05/2006	0.306	0.327	0.175	0.18	0.213	0.212	0.22	0.235
17:35	29/05/2006	0.293	0.319	0.175	0.18	0.213	0.212	0.22	0.235
23:35	29/05/2006	0.296	0.316	0.175	0.179	0.213	0.212	0.22	0.235
05:35	30/05/2006	0.301	0.316	0.174	0.179	0.212	0.211	0.219	0.234
11:35	30/05/2006	0.299	0.318	0.174	0.179	0.212	0.211	0.22	0.235
17:35	30/05/2006	0.291	0.313	0.174	0.179	0.212	0.211	0.22	0.235
23:35	30/05/2006	0.293	0.311	0.173	0.179	0.212	0.211	0.22	0.235
05:35	31/05/2006	0.296	0.31	0.172	0.177	0.21	0.21	0.218	0.233
11:35	31/05/2006	0.293	0.312	0.172	0.178	0.212	0.211	0.219	0.234
17:35	31/05/2006	0.282	0.305	0.172	0.178	0.212	0.211	0.22	0.235
23:35	31/05/2006	0.283	0.303	0.172	0.178	0.212	0.211	0.22	0.235
05:35	01/06/2006	0.286	0.301	0.171	0.177	0.21	0.21	0.218	0.233
11:35	01/06/2006	0.283	0.301	0.171	0.177	0.211	0.21	0.219	0.234
17:35	01/06/2006	0.27	0.294	0.171	0.177	0.211	0.211	0.219	0.234
23:35	01/06/2006	0.274	0.293	0.171	0.177	0.211	0.211	0.22	0.235
05:35	02/06/2006	0.276	0.291	0.169	0.176	0.21	0.21	0.218	0.233
11:35	02/06/2006	0.274	0.292	0.17	0.177	0.211	0.21	0.219	0.234
17:35	02/06/2006	0.265	0.286	0.169	0.176	0.211	0.211	0.219	0.235
23:35	02/06/2006	0.267	0.285	0.169	0.176	0.211	0.21	0.219	0.235
05:35	03/06/2006	0.27	0.286	0.169	0.176	0.21	0.21	0.219	0.235
11:35	03/06/2006	0.27	0.287	0.17	0.177	0.211	0.211	0.22	0.235
17:35	03/06/2006	0.269	0.284	0.168	0.176	0.21	0.21	0.219	0.235
23:35	03/06/2006	0.27	0.284	0.168	0.175	0.21	0.21	0.219	0.234
05:35	04/06/2006	0.273	0.284	0.167	0.175	0.209	0.209	0.218	0.233
11:35	04/06/2006	0.27	0.285	0.167	0.175	0.21	0.21	0.219	0.234
17:35	04/06/2006	0.262	0.28	0.167	0.175	0.209	0.21	0.219	0.234
23:35	04/06/2006	0.264	0.279	0.167	0.175	0.209	0.21	0.219	0.235
05:35	05/06/2006	0.267	0.279	0.166	0.174	0.208	0.209	0.218	0.233
11:35	05/06/2006	0.265	0.28	0.166	0.174	0.209	0.21	0.219	0.234
17:35	05/06/2006	0.258	0.277	0.167	0.175	0.21	0.21	0.22	0.236
23:35	05/06/2006	0.26	0.275	0.166	0.174	0.209	0.21	0.219	0.235
05:35	06/06/2006	0.262	0.274	0.164	0.172	0.206	0.208	0.217	0.232
11:35	06/06/2006	0.263	0.277	0.166	0.174	0.208	0.209	0.218	0.234
17:35	06/06/2006	0.259	0.275	0.166	0.174	0.209	0.21	0.219	0.234
23:35	06/06/2006	0.261	0.274	0.165	0.174	0.208	0.209	0.219	0.234
05:35	07/06/2006	0.263	0.275	0.165	0.173	0.208	0.209	0.218	0.233
11:35	07/06/2006	0.261	0.274	0.164	0.173	0.207	0.209	0.218	0.233
17:35	07/06/2006	0.255	0.271	0.164	0.172	0.207	0.209	0.218	0.233
23:35	07/06/2006	0.257	0.272	0.165	0.173	0.208	0.21	0.219	0.234
05:35	08/06/2006	0.259	0.271	0.164	0.172	0.207	0.209	0.218	0.233
11:35	08/06/2006	0.257	0.272	0.164	0.173	0.208	0.209	0.218	0.234
17:35	08/06/2006	0.251	0.268	0.164	0.172	0.208	0.209	0.219	0.234
23:35	08/06/2006	0.253	0.267	0.164	0.172	0.208	0.209	0.219	0.234
05:35	09/06/2006	0.254	0.268	0.163	0.172	0.207	0.209	0.218	0.234
11:35	09/06/2006	0.254	0.268	0.164	0.172	0.207	0.209	0.218	0.234
17:35	09/06/2006	0.252	0.266	0.163	0.171	0.207	0.209	0.218	0.233
23:35	09/06/2006	0.254	0.268	0.163	0.172	0.207	0.209	0.218	0.234
05:35	10/06/2006	0.256	0.268	0.163	0.172	0.207	0.209	0.218	0.234
11:35	10/06/2006	0.256	0.269	0.163	0.172	0.207	0.209	0.218	0.234
17:35	10/06/2006	0.253	0.267	0.163	0.172	0.207	0.209	0.218	0.234
23:35	10/06/2006	0.254	0.267	0.163	0.172	0.207	0.209	0.218	0.234
05:35	11/06/2006	0.255	0.267	0.163	0.172	0.207	0.209	0.218	0.234
11:35	11/06/2006	0.254	0.266	0.162	0.171	0.206	0.209	0.217	0.233
17:35	11/06/2006	0.251	0.265	0.162	0.171	0.206	0.209	0.217	0.233
23:35	11/06/2006	0.252	0.265	0.162	0.171	0.206	0.209	0.218	0.233
05:35	12/06/2006	0.253	0.265	0.162	0.171	0.207	0.209	0.218	0.233
11:35	12/06/2006	0.251	0.264	0.161	0.171	0.206	0.209	0.217	0.233
17:35	12/06/2006	0.245	0.261	0.162	0.171	0.207	0.209	0.218	0.234
23:35	12/06/2006	0.247	0.26	0.162	0.171	0.206	0.209	0.218	0.234
05:35	13/06/2006	0.248	0.26	0.16	0.169	0.205	0.208	0.217	0.232

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
11:35	13/06/2006	0.246	0.259	0.16	0.169	0.205	0.208	0.217	0.232
17:35	13/06/2006	0.242	0.257	0.161	0.17	0.206	0.209	0.218	0.234
23:35	13/06/2006	0.243	0.256	0.161	0.169	0.206	0.209	0.218	0.234
05:35	14/06/2006	0.243	0.256	0.16	0.169	0.205	0.209	0.217	0.233
11:35	14/06/2006	0.242	0.255	0.159	0.168	0.204	0.208	0.217	0.232
17:35	14/06/2006	0.235	0.251	0.159	0.168	0.204	0.209	0.218	0.233
23:35	14/06/2006	0.237	0.251	0.16	0.168	0.205	0.209	0.218	0.234
05:35	15/06/2006	0.238	0.25	0.158	0.166	0.203	0.208	0.217	0.232
11:35	15/06/2006	0.236	0.25	0.158	0.166	0.203	0.208	0.217	0.232
17:35	15/06/2006	0.231	0.246	0.157	0.166	0.203	0.208	0.217	0.233
23:35	15/06/2006	0.232	0.246	0.158	0.166	0.204	0.208	0.218	0.234
05:35	16/06/2006	0.233	0.246	0.157	0.165	0.203	0.208	0.217	0.233
11:35	16/06/2006	0.231	0.245	0.156	0.165	0.202	0.207	0.217	0.232
17:35	16/06/2006	0.227	0.242	0.155	0.163	0.202	0.207	0.217	0.233
23:35	16/06/2006	0.228	0.242	0.156	0.164	0.203	0.208	0.218	0.234
05:35	17/06/2006	0.229	0.242	0.155	0.163	0.201	0.207	0.217	0.232
11:35	17/06/2006	0.228	0.241	0.155	0.163	0.202	0.208	0.218	0.233
17:35	17/06/2006	0.224	0.239	0.155	0.163	0.202	0.208	0.218	0.234
23:35	17/06/2006	0.228	0.239	0.155	0.163	0.201	0.207	0.218	0.233
05:35	18/06/2006	0.233	0.24	0.154	0.162	0.201	0.207	0.217	0.232
11:35	18/06/2006	0.234	0.241	0.154	0.162	0.2	0.207	0.217	0.232
17:35	18/06/2006	0.232	0.24	0.155	0.163	0.202	0.208	0.218	0.234
23:35	18/06/2006	0.235	0.241	0.154	0.162	0.201	0.207	0.218	0.233
05:35	19/06/2006	0.237	0.242	0.154	0.162	0.201	0.207	0.217	0.233
11:35	19/06/2006	0.247	0.243	0.154	0.162	0.2	0.207	0.217	0.233
17:35	19/06/2006	0.257	0.245	0.154	0.161	0.2	0.206	0.216	0.232
23:35	19/06/2006	0.263	0.249	0.155	0.163	0.201	0.207	0.217	0.233
05:35	20/06/2006	0.267	0.251	0.154	0.161	0.199	0.206	0.216	0.231
11:35	20/06/2006	0.266	0.254	0.155	0.162	0.2	0.206	0.216	0.232
17:35	20/06/2006	0.262	0.256	0.157	0.165	0.204	0.209	0.219	0.236
23:35	20/06/2006	0.272	0.258	0.156	0.162	0.201	0.207	0.217	0.233
05:35	21/06/2006	0.286	0.264	0.156	0.162	0.201	0.207	0.217	0.233
11:35	21/06/2006	0.291	0.27	0.156	0.162	0.201	0.207	0.217	0.232
17:35	21/06/2006	0.293	0.276	0.157	0.163	0.201	0.207	0.217	0.233
23:35	21/06/2006	0.294	0.28	0.157	0.163	0.201	0.207	0.217	0.233
05:35	22/06/2006	0.297	0.283	0.158	0.163	0.201	0.207	0.217	0.232
11:35	22/06/2006	0.292	0.284	0.158	0.163	0.201	0.207	0.216	0.232
17:35	22/06/2006	0.276	0.279	0.158	0.162	0.201	0.207	0.217	0.232
23:35	22/06/2006	0.28	0.28	0.159	0.163	0.201	0.207	0.217	0.233
05:35	23/06/2006	0.282	0.279	0.157	0.162	0.199	0.206	0.216	0.231
11:35	23/06/2006	0.278	0.28	0.158	0.162	0.2	0.207	0.216	0.232
17:35	23/06/2006	0.268	0.275	0.158	0.162	0.2	0.206	0.216	0.232
23:35	23/06/2006	0.273	0.276	0.159	0.163	0.201	0.207	0.217	0.233
05:35	24/06/2006	0.276	0.276	0.157	0.161	0.199	0.206	0.215	0.231
11:35	24/06/2006	0.273	0.277	0.158	0.162	0.2	0.206	0.216	0.232
17:35	24/06/2006	0.263	0.272	0.158	0.163	0.201	0.207	0.217	0.233
23:35	24/06/2006	0.265	0.271	0.158	0.162	0.201	0.207	0.217	0.233
05:35	25/06/2006	0.267	0.271	0.157	0.161	0.2	0.206	0.216	0.231
11:35	25/06/2006	0.264	0.271	0.157	0.162	0.2	0.206	0.216	0.232
17:35	25/06/2006	0.254	0.265	0.157	0.162	0.2	0.206	0.216	0.232
23:35	25/06/2006	0.259	0.266	0.158	0.162	0.201	0.207	0.217	0.233
05:35	26/06/2006	0.26	0.265	0.156	0.161	0.199	0.205	0.215	0.231
11:35	26/06/2006	0.258	0.266	0.156	0.161	0.2	0.206	0.216	0.231
17:35	26/06/2006	0.248	0.261	0.156	0.161	0.2	0.206	0.216	0.232
23:35	26/06/2006	0.251	0.26	0.156	0.161	0.2	0.206	0.217	0.233
05:35	27/06/2006	0.253	0.26	0.155	0.16	0.199	0.205	0.216	0.231
11:35	27/06/2006	0.249	0.258	0.154	0.159	0.198	0.205	0.215	0.23
17:35	27/06/2006	0.242	0.254	0.154	0.159	0.198	0.205	0.216	0.232
23:35	27/06/2006	0.244	0.254	0.155	0.159	0.199	0.206	0.216	0.232
05:35	28/06/2006	0.244	0.253	0.153	0.158	0.197	0.205	0.215	0.231
11:35	28/06/2006	0.244	0.252	0.153	0.158	0.197	0.205	0.215	0.23
17:35	28/06/2006	0.238	0.25	0.154	0.159	0.198	0.206	0.216	0.232
23:35	28/06/2006	0.24	0.25	0.154	0.159	0.199	0.206	0.216	0.233
05:35	29/06/2006	0.241	0.25	0.153	0.158	0.198	0.205	0.216	0.232
11:35	29/06/2006	0.241	0.25	0.153	0.158	0.197	0.205	0.215	0.231
17:35	29/06/2006	0.235	0.247	0.153	0.158	0.197	0.205	0.216	0.232
23:35	29/06/2006	0.237	0.247	0.153	0.158	0.198	0.205	0.216	0.232
05:35	30/06/2006	0.238	0.246	0.152	0.157	0.196	0.204	0.215	0.23
11:35	30/06/2006	0.236	0.246	0.151	0.157	0.196	0.204	0.215	0.231
17:35	30/06/2006	0.232	0.244	0.152	0.158	0.198	0.205	0.216	0.232
23:35	30/06/2006	0.233	0.244	0.152	0.157	0.197	0.205	0.216	0.232

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
05:35	01/07/2006	0.234	0.244	0.151	0.157	0.197	0.205	0.215	0.231
11:35	01/07/2006	0.232	0.242	0.15	0.156	0.196	0.204	0.214	0.23
17:35	01/07/2006	0.228	0.241	0.151	0.157	0.197	0.205	0.216	0.232
23:35	01/07/2006	0.23	0.241	0.151	0.157	0.197	0.205	0.216	0.232
05:35	02/07/2006	0.23	0.24	0.149	0.155	0.195	0.204	0.214	0.23
11:35	02/07/2006	0.228	0.239	0.149	0.156	0.196	0.204	0.215	0.231
17:35	02/07/2006	0.223	0.236	0.149	0.156	0.196	0.205	0.215	0.232
23:35	02/07/2006	0.225	0.237	0.15	0.156	0.196	0.205	0.216	0.232
05:35	03/07/2006	0.225	0.236	0.148	0.154	0.194	0.204	0.214	0.23
11:35	03/07/2006	0.224	0.236	0.148	0.155	0.195	0.204	0.214	0.231
17:35	03/07/2006	0.22	0.233	0.148	0.155	0.196	0.205	0.215	0.232
23:35	03/07/2006	0.221	0.233	0.148	0.155	0.196	0.205	0.215	0.232
05:35	04/07/2006	0.221	0.233	0.147	0.154	0.194	0.204	0.215	0.231
11:35	04/07/2006	0.219	0.231	0.146	0.153	0.193	0.204	0.214	0.23
17:35	04/07/2006	0.216	0.229	0.146	0.153	0.194	0.204	0.215	0.232
23:35	04/07/2006	0.216	0.229	0.146	0.153	0.194	0.204	0.215	0.232
05:35	05/07/2006	0.217	0.229	0.146	0.153	0.194	0.204	0.215	0.232
11:35	05/07/2006	0.215	0.228	0.145	0.152	0.193	0.204	0.214	0.23
17:35	05/07/2006	0.213	0.226	0.145	0.152	0.193	0.204	0.215	0.232
23:35	05/07/2006	0.214	0.227	0.145	0.152	0.193	0.204	0.215	0.231
05:35	06/07/2006	0.214	0.227	0.144	0.152	0.193	0.204	0.215	0.231
11:35	06/07/2006	0.213	0.226	0.144	0.152	0.193	0.204	0.214	0.231
17:35	06/07/2006	0.211	0.225	0.144	0.151	0.193	0.204	0.215	0.231
23:35	06/07/2006	0.212	0.224	0.143	0.151	0.193	0.204	0.215	0.231
05:35	07/07/2006	0.212	0.224	0.143	0.151	0.193	0.204	0.215	0.231
11:35	07/07/2006	0.211	0.224	0.143	0.151	0.193	0.204	0.215	0.231
17:35	07/07/2006	0.211	0.224	0.143	0.151	0.193	0.204	0.215	0.231
23:35	07/07/2006	0.212	0.224	0.143	0.151	0.193	0.204	0.215	0.231
05:35	08/07/2006	0.212	0.224	0.143	0.151	0.193	0.204	0.214	0.231
11:35	08/07/2006	0.211	0.223	0.142	0.151	0.192	0.204	0.214	0.23
17:35	08/07/2006	0.21	0.223	0.142	0.151	0.193	0.204	0.214	0.231
23:35	08/07/2006	0.211	0.223	0.142	0.151	0.193	0.204	0.215	0.231
05:35	09/07/2006	0.211	0.223	0.142	0.151	0.192	0.204	0.214	0.231
11:35	09/07/2006	0.21	0.222	0.141	0.15	0.192	0.204	0.214	0.23
17:35	09/07/2006	0.208	0.221	0.141	0.151	0.192	0.204	0.215	0.231
23:35	09/07/2006	0.209	0.221	0.141	0.151	0.192	0.205	0.215	0.231
05:35	10/07/2006	0.209	0.221	0.141	0.15	0.192	0.204	0.214	0.231
11:35	10/07/2006	0.208	0.22	0.14	0.15	0.192	0.204	0.214	0.231
17:35	10/07/2006	0.207	0.22	0.14	0.15	0.192	0.204	0.214	0.231
23:35	10/07/2006	0.246	0.242	0.141	0.15	0.191	0.204	0.214	0.231
05:35	11/07/2006	0.432	0.462	0.172	0.159	0.195	0.213	0.214	0.231
11:35	11/07/2006	0.434	0.482	0.188	0.181	0.213	0.226	0.214	0.23
17:35	11/07/2006	0.398	0.448	0.19	0.185	0.218	0.225	0.214	0.231
23:35	11/07/2006	0.391	0.432	0.19	0.186	0.218	0.223	0.214	0.231
05:35	12/07/2006	0.393	0.427	0.19	0.187	0.218	0.222	0.214	0.23
11:35	12/07/2006	0.378	0.419	0.189	0.187	0.217	0.22	0.217	0.229
17:35	12/07/2006	0.344	0.396	0.189	0.188	0.219	0.221	0.234	0.231
23:35	12/07/2006	0.345	0.382	0.188	0.188	0.219	0.22	0.239	0.231
05:35	13/07/2006	0.351	0.381	0.187	0.188	0.218	0.219	0.239	0.23
11:35	13/07/2006	0.343	0.379	0.187	0.187	0.218	0.219	0.24	0.23
17:35	13/07/2006	0.329	0.368	0.187	0.188	0.219	0.219	0.241	0.231
23:35	13/07/2006	0.341	0.373	0.186	0.187	0.218	0.218	0.24	0.231
05:35	14/07/2006	0.345	0.373	0.185	0.186	0.217	0.216	0.238	0.23
11:35	14/07/2006	0.341	0.374	0.185	0.186	0.217	0.216	0.239	0.23
17:35	14/07/2006	0.316	0.356	0.185	0.187	0.218	0.216	0.239	0.231
23:35	14/07/2006	0.322	0.35	0.184	0.186	0.217	0.216	0.239	0.231
05:35	15/07/2006	0.329	0.352	0.183	0.185	0.217	0.215	0.238	0.23
11:35	15/07/2006	0.322	0.349	0.182	0.185	0.216	0.215	0.237	0.23
17:35	15/07/2006	0.304	0.337	0.182	0.185	0.217	0.215	0.238	0.23
23:35	15/07/2006	0.324	0.347	0.182	0.185	0.217	0.214	0.238	0.231
05:35	16/07/2006	0.33	0.352	0.182	0.184	0.216	0.214	0.238	0.23
11:35	16/07/2006	0.325	0.351	0.181	0.183	0.215	0.213	0.236	0.229
17:35	16/07/2006	0.308	0.342	0.182	0.184	0.216	0.213	0.237	0.23
23:35	16/07/2006	0.311	0.337	0.182	0.184	0.217	0.213	0.237	0.23
05:35	17/07/2006	0.314	0.334	0.179	0.183	0.215	0.212	0.235	0.229
11:35	17/07/2006	0.308	0.332	0.179	0.183	0.215	0.212	0.235	0.229
17:35	17/07/2006	0.293	0.324	0.179	0.183	0.216	0.212	0.236	0.23
23:35	17/07/2006	0.297	0.321	0.179	0.183	0.216	0.212	0.236	0.23
05:35	18/07/2006	0.302	0.321	0.178	0.183	0.215	0.212	0.236	0.23
11:35	18/07/2006	0.297	0.319	0.177	0.182	0.215	0.211	0.235	0.229
17:35	18/07/2006	0.292	0.312	0.176	0.181	0.214	0.21	0.234	0.229

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
23:35	18/07/2006	0.296	0.315	0.177	0.182	0.215	0.211	0.235	0.23
05:35	19/07/2006	0.299	0.315	0.176	0.181	0.214	0.21	0.234	0.229
11:35	19/07/2006	0.294	0.314	0.175	0.181	0.214	0.21	0.233	0.229
17:35	19/07/2006	0.28	0.306	0.176	0.181	0.215	0.21	0.234	0.23
23:35	19/07/2006	0.285	0.306	0.176	0.181	0.215	0.21	0.235	0.23
05:35	20/07/2006	0.288	0.305	0.174	0.18	0.214	0.209	0.233	0.229
11:35	20/07/2006	0.284	0.304	0.174	0.18	0.214	0.209	0.233	0.229
17:35	20/07/2006	0.27	0.295	0.174	0.18	0.214	0.209	0.233	0.23
23:35	20/07/2006	0.274	0.294	0.174	0.18	0.214	0.209	0.234	0.231
05:35	21/07/2006	0.278	0.294	0.172	0.179	0.213	0.208	0.233	0.23
11:35	21/07/2006	0.273	0.292	0.172	0.179	0.213	0.208	0.232	0.229
17:35	21/07/2006	0.262	0.285	0.171	0.179	0.214	0.208	0.233	0.23
23:35	21/07/2006	0.265	0.284	0.172	0.179	0.214	0.208	0.233	0.231
05:35	22/07/2006	0.269	0.284	0.17	0.178	0.213	0.207	0.232	0.231
11:35	22/07/2006	0.263	0.281	0.169	0.177	0.211	0.206	0.23	0.23
17:35	22/07/2006	0.253	0.275	0.169	0.178	0.213	0.207	0.232	0.232
23:35	22/07/2006	0.257	0.275	0.169	0.178	0.213	0.207	0.232	0.233
05:35	23/07/2006	0.259	0.274	0.168	0.176	0.211	0.206	0.231	0.232
11:35	23/07/2006	0.257	0.273	0.167	0.175	0.211	0.205	0.23	0.232
17:35	23/07/2006	0.249	0.269	0.167	0.176	0.212	0.206	0.231	0.234
23:35	23/07/2006	0.252	0.269	0.168	0.177	0.213	0.207	0.232	0.236
05:35	24/07/2006	0.255	0.27	0.167	0.176	0.212	0.206	0.231	0.235
11:35	24/07/2006	0.254	0.269	0.166	0.175	0.211	0.205	0.23	0.235
17:35	24/07/2006	0.248	0.266	0.166	0.176	0.212	0.205	0.231	0.236
23:35	24/07/2006	0.251	0.266	0.167	0.176	0.213	0.206	0.231	0.238
05:35	25/07/2006	0.253	0.267	0.166	0.175	0.212	0.205	0.23	0.237
11:35	25/07/2006	0.254	0.27	0.168	0.178	0.214	0.206	0.232	0.24
17:35	25/07/2006	0.247	0.265	0.166	0.176	0.212	0.205	0.23	0.239
23:35	25/07/2006	0.25	0.265	0.166	0.175	0.212	0.205	0.23	0.24
05:35	26/07/2006	0.252	0.266	0.166	0.175	0.212	0.205	0.229	0.24
11:35	26/07/2006	0.253	0.267	0.165	0.175	0.212	0.205	0.229	0.24
17:35	26/07/2006	0.252	0.267	0.166	0.176	0.212	0.205	0.229	0.241
23:35	26/07/2006	0.254	0.268	0.166	0.175	0.212	0.205	0.229	0.241
05:35	27/07/2006	0.258	0.269	0.166	0.176	0.212	0.205	0.229	0.241
11:35	27/07/2006	0.26	0.269	0.165	0.175	0.212	0.204	0.228	0.241
17:35	27/07/2006	0.256	0.268	0.166	0.176	0.212	0.205	0.229	0.242
23:35	27/07/2006	0.259	0.269	0.166	0.176	0.212	0.205	0.229	0.243
05:35	28/07/2006	0.263	0.271	0.165	0.175	0.211	0.204	0.228	0.242
11:35	28/07/2006	0.26	0.271	0.165	0.174	0.211	0.204	0.227	0.241
17:35	28/07/2006	0.253	0.268	0.165	0.175	0.212	0.205	0.228	0.243
23:35	28/07/2006	0.256	0.269	0.166	0.175	0.212	0.205	0.228	0.244
05:35	29/07/2006	0.259	0.27	0.166	0.175	0.212	0.205	0.228	0.244
11:35	29/07/2006	0.259	0.27	0.165	0.175	0.211	0.204	0.227	0.244
17:35	29/07/2006	0.257	0.27	0.166	0.175	0.212	0.205	0.228	0.244
23:35	29/07/2006	0.258	0.271	0.166	0.176	0.212	0.205	0.228	0.245
05:35	30/07/2006	0.26	0.271	0.165	0.175	0.211	0.204	0.227	0.244
11:35	30/07/2006	0.263	0.272	0.166	0.175	0.211	0.204	0.227	0.244
17:35	30/07/2006	0.27	0.274	0.166	0.176	0.212	0.204	0.227	0.245
23:35	30/07/2006	0.296	0.28	0.166	0.176	0.212	0.204	0.227	0.245
05:35	31/07/2006	0.305	0.288	0.166	0.175	0.211	0.204	0.227	0.244
11:35	31/07/2006	0.304	0.294	0.168	0.176	0.213	0.205	0.227	0.246
17:35	31/07/2006	0.324	0.3	0.168	0.176	0.212	0.204	0.227	0.245
23:35	31/07/2006	0.363	0.35	0.17	0.176	0.212	0.205	0.227	0.245
05:35	01/08/2006	0.364	0.359	0.173	0.176	0.211	0.204	0.226	0.244
11:35	01/08/2006	0.358	0.365	0.176	0.177	0.211	0.205	0.226	0.244
17:35	01/08/2006	0.332	0.355	0.178	0.177	0.212	0.205	0.226	0.245
23:35	01/08/2006	0.336	0.351	0.178	0.178	0.212	0.205	0.226	0.245
05:35	02/08/2006	0.342	0.351	0.177	0.177	0.211	0.204	0.225	0.244
11:35	02/08/2006	0.339	0.353	0.178	0.178	0.212	0.204	0.225	0.244
17:35	02/08/2006	0.317	0.343	0.178	0.178	0.212	0.205	0.226	0.245
23:35	02/08/2006	0.323	0.341	0.178	0.179	0.213	0.205	0.226	0.246
05:35	03/08/2006	0.328	0.342	0.178	0.179	0.213	0.205	0.226	0.245
11:35	03/08/2006	0.324	0.342	0.177	0.179	0.213	0.205	0.225	0.245
17:35	03/08/2006	0.312	0.335	0.178	0.179	0.213	0.205	0.226	0.246
23:35	03/08/2006	0.316	0.334	0.177	0.179	0.213	0.205	0.226	0.245
05:35	04/08/2006	0.323	0.335	0.177	0.179	0.213	0.205	0.225	0.245
11:35	04/08/2006	0.322	0.338	0.176	0.179	0.213	0.204	0.225	0.244
17:35	04/08/2006	0.309	0.332	0.176	0.179	0.212	0.204	0.224	0.244
23:35	04/08/2006	0.315	0.332	0.177	0.179	0.213	0.204	0.225	0.245
05:35	05/08/2006	0.322	0.335	0.177	0.179	0.213	0.204	0.225	0.245
11:35	05/08/2006	0.316	0.334	0.177	0.179	0.213	0.204	0.225	0.244

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
17:35	05/08/2006	0.302	0.325	0.176	0.179	0.213	0.204	0.224	0.244
23:35	05/08/2006	0.307	0.326	0.177	0.18	0.214	0.205	0.225	0.246
05:35	06/08/2006	0.311	0.326	0.176	0.179	0.213	0.204	0.224	0.245
11:35	06/08/2006	0.309	0.328	0.176	0.18	0.214	0.204	0.225	0.245
17:35	06/08/2006	0.296	0.32	0.176	0.18	0.214	0.204	0.225	0.245
23:35	06/08/2006	0.299	0.319	0.176	0.18	0.214	0.204	0.225	0.246
05:35	07/08/2006	0.303	0.319	0.175	0.18	0.214	0.204	0.225	0.245
11:35	07/08/2006	0.297	0.316	0.174	0.179	0.213	0.204	0.224	0.244
17:35	07/08/2006	0.283	0.309	0.174	0.18	0.214	0.204	0.225	0.245
23:35	07/08/2006	0.286	0.307	0.174	0.179	0.214	0.204	0.225	0.246
05:35	08/08/2006	0.291	0.308	0.174	0.179	0.213	0.204	0.224	0.245
11:35	08/08/2006	0.29	0.307	0.173	0.179	0.213	0.204	0.224	0.245
17:35	08/08/2006	0.285	0.305	0.173	0.179	0.214	0.204	0.224	0.245
23:35	08/08/2006	0.287	0.305	0.173	0.179	0.214	0.204	0.224	0.245
05:35	09/08/2006	0.29	0.306	0.173	0.179	0.214	0.204	0.224	0.245
11:35	09/08/2006	0.288	0.304	0.172	0.178	0.212	0.203	0.223	0.244
17:35	09/08/2006	0.281	0.301	0.173	0.179	0.214	0.203	0.224	0.245
23:35	09/08/2006	0.286	0.303	0.173	0.179	0.214	0.204	0.224	0.246
05:35	10/08/2006	0.291	0.304	0.172	0.178	0.213	0.203	0.224	0.245
11:35	10/08/2006	0.288	0.304	0.172	0.178	0.213	0.203	0.223	0.244
17:35	10/08/2006	0.276	0.298	0.172	0.179	0.214	0.203	0.224	0.245
23:35	10/08/2006	0.279	0.297	0.172	0.179	0.214	0.203	0.224	0.245
05:35	11/08/2006	0.284	0.298	0.171	0.178	0.212	0.203	0.223	0.244
11:35	11/08/2006	0.284	0.299	0.171	0.178	0.213	0.203	0.223	0.245
17:35	11/08/2006	0.281	0.298	0.171	0.179	0.213	0.203	0.223	0.245
23:35	11/08/2006	0.28	0.296	0.171	0.178	0.213	0.203	0.223	0.245
05:35	12/08/2006	0.283	0.297	0.171	0.178	0.213	0.203	0.223	0.245
11:35	12/08/2006	0.279	0.296	0.17	0.178	0.213	0.203	0.223	0.244
17:35	12/08/2006	0.27	0.291	0.17	0.178	0.213	0.203	0.223	0.245
23:35	12/08/2006	0.274	0.291	0.17	0.178	0.213	0.203	0.223	0.245
05:35	13/08/2006	0.278	0.292	0.17	0.178	0.212	0.203	0.223	0.244
11:35	13/08/2006	0.276	0.292	0.169	0.177	0.212	0.203	0.222	0.243
17:35	13/08/2006	0.266	0.288	0.171	0.179	0.215	0.204	0.224	0.246
23:35	13/08/2006	0.268	0.286	0.17	0.178	0.213	0.203	0.223	0.245
05:35	14/08/2006	0.272	0.287	0.169	0.177	0.212	0.203	0.223	0.244
11:35	14/08/2006	0.269	0.285	0.168	0.177	0.212	0.202	0.222	0.243
17:35	14/08/2006	0.261	0.281	0.168	0.177	0.212	0.203	0.223	0.244
23:35	14/08/2006	0.263	0.281	0.169	0.177	0.213	0.203	0.223	0.245
05:35	15/08/2006	0.268	0.281	0.168	0.177	0.212	0.203	0.222	0.244
11:35	15/08/2006	0.275	0.286	0.17	0.178	0.214	0.203	0.223	0.245
17:35	15/08/2006	0.35	0.338	0.17	0.177	0.212	0.202	0.222	0.244
23:35	15/08/2006	0.353	0.353	0.173	0.177	0.212	0.203	0.222	0.244
05:35	16/08/2006	0.356	0.36	0.176	0.178	0.212	0.202	0.222	0.244
11:35	16/08/2006	0.355	0.365	0.178	0.179	0.213	0.203	0.222	0.244
17:35	16/08/2006	0.339	0.36	0.179	0.179	0.213	0.203	0.222	0.244
23:35	16/08/2006	0.341	0.356	0.179	0.179	0.213	0.203	0.222	0.244
05:35	17/08/2006	0.348	0.359	0.18	0.18	0.213	0.203	0.222	0.244
11:35	17/08/2006	0.345	0.361	0.18	0.18	0.213	0.203	0.221	0.243
17:35	17/08/2006	0.325	0.35	0.179	0.18	0.213	0.203	0.221	0.243
23:35	17/08/2006	0.328	0.348	0.18	0.181	0.213	0.203	0.222	0.244
05:35	18/08/2006	0.332	0.349	0.18	0.181	0.214	0.203	0.222	0.244
11:35	18/08/2006	0.327	0.346	0.178	0.18	0.213	0.202	0.22	0.242
17:35	18/08/2006	0.311	0.339	0.18	0.182	0.215	0.203	0.222	0.245
23:35	18/08/2006	0.314	0.335	0.179	0.181	0.214	0.203	0.222	0.244
05:35	19/08/2006	0.319	0.336	0.179	0.181	0.214	0.203	0.221	0.243
11:35	19/08/2006	0.317	0.335	0.178	0.181	0.214	0.203	0.221	0.243
17:35	19/08/2006	0.304	0.327	0.177	0.18	0.214	0.203	0.221	0.243
23:35	19/08/2006	0.309	0.327	0.178	0.181	0.214	0.203	0.221	0.244
05:35	20/08/2006	0.313	0.329	0.177	0.181	0.214	0.203	0.221	0.243
11:35	20/08/2006	0.309	0.328	0.177	0.18	0.214	0.203	0.221	0.243
17:35	20/08/2006	0.296	0.32	0.176	0.18	0.214	0.203	0.221	0.243
23:35	20/08/2006	0.301	0.32	0.177	0.181	0.214	0.203	0.221	0.244
05:35	21/08/2006	0.306	0.321	0.176	0.18	0.214	0.203	0.221	0.243
11:35	21/08/2006	0.302	0.32	0.175	0.18	0.213	0.202	0.22	0.242
17:35	21/08/2006	0.288	0.312	0.175	0.18	0.214	0.203	0.221	0.243
23:35	21/08/2006	0.292	0.312	0.175	0.181	0.214	0.203	0.221	0.244
05:35	22/08/2006	0.296	0.313	0.175	0.18	0.214	0.203	0.221	0.243
11:35	22/08/2006	0.292	0.31	0.174	0.179	0.213	0.202	0.22	0.242
17:35	22/08/2006	0.28	0.304	0.174	0.18	0.214	0.203	0.221	0.243
23:35	22/08/2006	0.282	0.302	0.173	0.18	0.214	0.203	0.221	0.243
05:35	23/08/2006	0.285	0.302	0.173	0.18	0.214	0.202	0.221	0.243

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
11:35	23/08/2006	0.285	0.303	0.173	0.18	0.213	0.202	0.22	0.243
17:35	23/08/2006	0.285	0.302	0.173	0.179	0.213	0.202	0.22	0.242
23:35	23/08/2006	0.286	0.303	0.173	0.18	0.214	0.202	0.221	0.243
05:35	24/08/2006	0.289	0.304	0.173	0.179	0.214	0.202	0.22	0.242
11:35	24/08/2006	0.286	0.303	0.172	0.179	0.213	0.202	0.22	0.242
17:35	24/08/2006	0.276	0.298	0.173	0.18	0.214	0.203	0.221	0.243
23:35	24/08/2006	0.28	0.298	0.172	0.18	0.214	0.203	0.221	0.243
05:35	25/08/2006	0.283	0.298	0.172	0.179	0.214	0.202	0.22	0.243
11:35	25/08/2006	0.281	0.298	0.171	0.179	0.213	0.202	0.219	0.241
17:35	25/08/2006	0.272	0.293	0.171	0.18	0.214	0.203	0.22	0.243
23:35	25/08/2006	0.275	0.293	0.171	0.179	0.214	0.203	0.22	0.243
05:35	26/08/2006	0.278	0.294	0.171	0.179	0.213	0.202	0.22	0.242
11:35	26/08/2006	0.276	0.293	0.17	0.179	0.213	0.202	0.22	0.242
17:35	26/08/2006	0.267	0.289	0.17	0.179	0.214	0.203	0.22	0.243
23:35	26/08/2006	0.27	0.288	0.17	0.179	0.213	0.202	0.22	0.242
05:35	27/08/2006	0.273	0.289	0.17	0.178	0.213	0.202	0.22	0.242
11:35	27/08/2006	0.272	0.289	0.17	0.178	0.213	0.202	0.219	0.242
17:35	27/08/2006	0.263	0.284	0.169	0.178	0.213	0.202	0.22	0.242
23:35	27/08/2006	0.266	0.284	0.169	0.178	0.213	0.202	0.22	0.242
05:35	28/08/2006	0.269	0.285	0.169	0.178	0.213	0.202	0.22	0.242
11:35	28/08/2006	0.267	0.284	0.169	0.178	0.213	0.202	0.219	0.241
17:35	28/08/2006	0.26	0.28	0.168	0.178	0.213	0.202	0.22	0.242
23:35	28/08/2006	0.262	0.28	0.169	0.178	0.213	0.203	0.22	0.242
05:35	29/08/2006	0.263	0.28	0.168	0.178	0.213	0.202	0.22	0.242
11:35	29/08/2006	0.261	0.278	0.167	0.177	0.212	0.202	0.219	0.241
17:35	29/08/2006	0.258	0.277	0.168	0.178	0.213	0.202	0.22	0.242
23:35	29/08/2006	0.259	0.277	0.168	0.178	0.213	0.202	0.22	0.242
05:35	30/08/2006	0.261	0.277	0.167	0.177	0.212	0.202	0.219	0.242
11:35	30/08/2006	0.261	0.277	0.167	0.177	0.212	0.202	0.219	0.241
17:35	30/08/2006	0.261	0.278	0.167	0.177	0.212	0.202	0.219	0.242
23:35	30/08/2006	0.264	0.278	0.167	0.177	0.212	0.202	0.219	0.241
05:35	31/08/2006	0.268	0.28	0.167	0.177	0.212	0.202	0.219	0.241
11:35	31/08/2006	0.27	0.281	0.167	0.177	0.212	0.202	0.219	0.241
17:35	31/08/2006	0.268	0.281	0.168	0.178	0.213	0.203	0.219	0.242
23:35	31/08/2006	0.271	0.282	0.168	0.177	0.212	0.202	0.219	0.241
05:35	01/09/2006	0.274	0.284	0.167	0.177	0.212	0.202	0.219	0.241
11:35	01/09/2006	0.273	0.285	0.167	0.176	0.211	0.202	0.218	0.24
17:35	01/09/2006	0.266	0.283	0.168	0.178	0.213	0.203	0.219	0.242
23:35	01/09/2006	0.268	0.283	0.168	0.177	0.212	0.203	0.219	0.241
05:35	02/09/2006	0.271	0.284	0.168	0.177	0.212	0.203	0.219	0.241
11:35	02/09/2006	0.268	0.283	0.167	0.176	0.211	0.202	0.218	0.24
17:35	02/09/2006	0.261	0.28	0.168	0.177	0.212	0.203	0.219	0.241
23:35	02/09/2006	0.263	0.279	0.168	0.177	0.212	0.203	0.219	0.242
05:35	03/09/2006	0.266	0.281	0.168	0.177	0.212	0.203	0.219	0.241
11:35	03/09/2006	0.264	0.28	0.167	0.177	0.211	0.203	0.218	0.24
17:35	03/09/2006	0.257	0.277	0.167	0.177	0.212	0.203	0.219	0.242
23:35	03/09/2006	0.26	0.276	0.168	0.177	0.212	0.203	0.219	0.242
05:35	04/09/2006	0.262	0.277	0.167	0.177	0.211	0.203	0.219	0.241
11:35	04/09/2006	0.26	0.276	0.166	0.175	0.21	0.202	0.218	0.239
17:35	04/09/2006	0.254	0.273	0.167	0.177	0.212	0.203	0.219	0.241
23:35	04/09/2006	0.256	0.273	0.167	0.176	0.211	0.202	0.219	0.241
05:35	05/09/2006	0.258	0.274	0.167	0.176	0.211	0.202	0.219	0.241
11:35	05/09/2006	0.258	0.274	0.166	0.176	0.211	0.202	0.218	0.24
17:35	05/09/2006	0.253	0.272	0.167	0.176	0.212	0.202	0.219	0.241
23:35	05/09/2006	0.255	0.271	0.167	0.176	0.211	0.202	0.219	0.241
05:35	06/09/2006	0.256	0.272	0.166	0.176	0.211	0.202	0.219	0.241
11:35	06/09/2006	0.254	0.27	0.165	0.175	0.21	0.201	0.218	0.239
17:35	06/09/2006	0.251	0.269	0.166	0.176	0.211	0.202	0.219	0.241
23:35	06/09/2006	0.252	0.268	0.166	0.175	0.211	0.202	0.219	0.241
05:35	07/09/2006	0.253	0.269	0.166	0.175	0.211	0.202	0.218	0.24
11:35	07/09/2006	0.252	0.268	0.165	0.175	0.21	0.202	0.218	0.239
17:35	07/09/2006	0.25	0.268	0.165	0.175	0.211	0.202	0.218	0.24
23:35	07/09/2006	0.251	0.268	0.165	0.175	0.211	0.202	0.218	0.24
05:35	08/09/2006	0.253	0.268	0.165	0.175	0.211	0.202	0.218	0.24
11:35	08/09/2006	0.251	0.267	0.164	0.174	0.209	0.201	0.217	0.239
17:35	08/09/2006	0.247	0.266	0.165	0.176	0.211	0.202	0.219	0.241
23:35	08/09/2006	0.248	0.265	0.165	0.175	0.21	0.202	0.218	0.24
05:35	09/09/2006	0.249	0.265	0.165	0.175	0.21	0.202	0.218	0.24
11:35	09/09/2006	0.248	0.264	0.164	0.174	0.209	0.202	0.217	0.239
17:35	09/09/2006	0.244	0.262	0.165	0.175	0.21	0.202	0.218	0.24
23:35	09/09/2006	0.245	0.262	0.165	0.175	0.21	0.202	0.218	0.24

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
05:35	10/09/2006	0.246	0.262	0.164	0.175	0.21	0.202	0.218	0.24
11:35	10/09/2006	0.244	0.26	0.163	0.173	0.208	0.201	0.217	0.238
17:35	10/09/2006	0.241	0.259	0.164	0.174	0.21	0.202	0.218	0.24
23:35	10/09/2006	0.242	0.259	0.164	0.174	0.209	0.202	0.218	0.24
05:35	11/09/2006	0.243	0.26	0.164	0.174	0.209	0.202	0.218	0.24
11:35	11/09/2006	0.242	0.259	0.163	0.174	0.209	0.202	0.217	0.239
17:35	11/09/2006	0.238	0.257	0.164	0.174	0.21	0.202	0.218	0.24
23:35	11/09/2006	0.24	0.257	0.163	0.174	0.209	0.202	0.218	0.24
05:35	12/09/2006	0.241	0.257	0.163	0.173	0.209	0.202	0.218	0.239
11:35	12/09/2006	0.24	0.257	0.162	0.173	0.209	0.202	0.217	0.239
17:35	12/09/2006	0.236	0.255	0.163	0.174	0.21	0.202	0.218	0.24
23:35	12/09/2006	0.237	0.255	0.162	0.173	0.209	0.202	0.218	0.24
05:35	13/09/2006	0.238	0.255	0.162	0.173	0.208	0.202	0.218	0.239
11:35	13/09/2006	0.237	0.255	0.162	0.173	0.208	0.202	0.217	0.239
17:35	13/09/2006	0.234	0.253	0.162	0.173	0.209	0.202	0.218	0.24
23:35	13/09/2006	0.235	0.252	0.162	0.173	0.209	0.202	0.218	0.239
05:35	14/09/2006	0.236	0.252	0.161	0.172	0.208	0.202	0.217	0.239
11:35	14/09/2006	0.237	0.253	0.161	0.173	0.208	0.202	0.217	0.239
17:35	14/09/2006	0.238	0.253	0.162	0.173	0.209	0.202	0.218	0.239
23:35	14/09/2006	0.241	0.253	0.161	0.173	0.208	0.202	0.217	0.239
05:35	15/09/2006	0.243	0.254	0.161	0.172	0.208	0.202	0.217	0.239
11:35	15/09/2006	0.244	0.255	0.16	0.172	0.208	0.202	0.217	0.238
17:35	15/09/2006	0.244	0.255	0.161	0.173	0.209	0.203	0.218	0.239
23:35	15/09/2006	0.246	0.255	0.161	0.172	0.208	0.203	0.217	0.239
05:35	16/09/2006	0.248	0.256	0.161	0.172	0.208	0.203	0.217	0.239
11:35	16/09/2006	0.247	0.256	0.159	0.171	0.207	0.202	0.216	0.237
17:35	16/09/2006	0.247	0.256	0.16	0.172	0.208	0.203	0.217	0.239
23:35	16/09/2006	0.249	0.257	0.16	0.172	0.208	0.203	0.217	0.238
05:35	17/09/2006	0.336	0.28	0.16	0.172	0.208	0.203	0.217	0.238
11:35	17/09/2006	0.349	0.302	0.161	0.172	0.207	0.203	0.217	0.238
17:35	17/09/2006	0.343	0.31	0.162	0.172	0.208	0.204	0.217	0.239
23:35	17/09/2006	0.341	0.314	0.162	0.172	0.208	0.204	0.217	0.239
05:35	18/09/2006	0.341	0.317	0.163	0.172	0.208	0.204	0.217	0.238
11:35	18/09/2006	0.34	0.319	0.163	0.172	0.207	0.204	0.217	0.238
17:35	18/09/2006	0.333	0.322	0.165	0.173	0.209	0.204	0.218	0.239
23:35	18/09/2006	0.334	0.321	0.165	0.173	0.208	0.204	0.218	0.238
05:35	19/09/2006	0.338	0.324	0.165	0.173	0.208	0.204	0.218	0.238
11:35	19/09/2006	0.336	0.324	0.165	0.172	0.207	0.204	0.217	0.237
17:35	19/09/2006	0.328	0.324	0.166	0.173	0.209	0.205	0.218	0.239
23:35	19/09/2006	0.327	0.323	0.166	0.173	0.208	0.204	0.218	0.238
05:35	20/09/2006	0.329	0.324	0.167	0.173	0.209	0.204	0.218	0.238
11:35	20/09/2006	0.328	0.325	0.167	0.173	0.208	0.204	0.218	0.238
17:35	20/09/2006	0.323	0.324	0.168	0.174	0.209	0.204	0.218	0.238
23:35	20/09/2006	0.322	0.323	0.168	0.174	0.209	0.204	0.218	0.238
05:35	21/09/2006	0.323	0.323	0.168	0.174	0.209	0.204	0.218	0.238
11:35	21/09/2006	0.322	0.322	0.167	0.174	0.208	0.204	0.217	0.237
17:35	21/09/2006	0.317	0.321	0.168	0.174	0.209	0.204	0.218	0.238
23:35	21/09/2006	0.318	0.322	0.169	0.175	0.209	0.204	0.218	0.238
05:35	22/09/2006	0.32	0.322	0.169	0.175	0.21	0.204	0.218	0.238
11:35	22/09/2006	0.319	0.321	0.168	0.174	0.209	0.204	0.217	0.237
17:35	22/09/2006	0.313	0.322	0.17	0.176	0.211	0.205	0.219	0.239
23:35	22/09/2006	0.314	0.319	0.169	0.175	0.21	0.204	0.218	0.238
05:35	23/09/2006	0.318	0.32	0.169	0.175	0.209	0.204	0.218	0.238
11:35	23/09/2006	0.317	0.321	0.169	0.175	0.209	0.204	0.218	0.237
17:35	23/09/2006	0.308	0.319	0.169	0.176	0.21	0.204	0.219	0.238
23:35	23/09/2006	0.31	0.316	0.169	0.175	0.209	0.204	0.218	0.237
05:35	24/09/2006	0.312	0.318	0.169	0.175	0.21	0.204	0.218	0.238
11:35	24/09/2006	0.311	0.318	0.169	0.175	0.209	0.204	0.218	0.237
17:35	24/09/2006	0.302	0.316	0.17	0.176	0.211	0.205	0.219	0.239
23:35	24/09/2006	0.306	0.314	0.169	0.176	0.21	0.204	0.218	0.238
05:35	25/09/2006	0.307	0.315	0.169	0.176	0.21	0.204	0.218	0.238
11:35	25/09/2006	0.305	0.314	0.169	0.175	0.21	0.204	0.218	0.237
17:35	25/09/2006	0.303	0.314	0.169	0.176	0.21	0.204	0.218	0.238
23:35	25/09/2006	0.304	0.313	0.169	0.176	0.21	0.204	0.218	0.238
05:35	26/09/2006	0.306	0.314	0.169	0.176	0.21	0.204	0.218	0.238
11:35	26/09/2006	0.306	0.314	0.169	0.176	0.21	0.204	0.218	0.237
17:35	26/09/2006	0.305	0.314	0.169	0.176	0.211	0.204	0.218	0.238
23:35	26/09/2006	0.31	0.315	0.169	0.176	0.21	0.204	0.218	0.237
05:35	27/09/2006	0.315	0.317	0.169	0.176	0.21	0.204	0.218	0.237
11:35	27/09/2006	0.314	0.318	0.168	0.176	0.21	0.204	0.217	0.236
17:35	27/09/2006	0.308	0.318	0.169	0.177	0.211	0.204	0.218	0.238

MLSB Coke Deep Cover Soil Water Content (m3/m3)

Time	Date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
23:35	27/09/2006	0.309	0.317	0.169	0.176	0.211	0.204	0.218	0.237
05:35	28/09/2006	0.331	0.324	0.169	0.176	0.211	0.204	0.218	0.237
11:35	28/09/2006	0.334	0.33	0.169	0.177	0.211	0.204	0.218	0.237
17:35	28/09/2006	0.328	0.331	0.17	0.177	0.211	0.204	0.218	0.238
23:35	28/09/2006	0.33	0.332	0.171	0.177	0.211	0.204	0.218	0.238
05:35	29/09/2006	0.333	0.333	0.17	0.176	0.211	0.204	0.218	0.237
11:35	29/09/2006	0.333	0.335	0.171	0.177	0.211	0.204	0.218	0.237
17:35	29/09/2006	0.327	0.334	0.171	0.177	0.211	0.204	0.218	0.237
23:35	29/09/2006	0.328	0.333	0.171	0.177	0.211	0.204	0.218	0.237
05:35	30/09/2006	0.33	0.334	0.171	0.177	0.211	0.204	0.218	0.237
11:35	30/09/2006	0.327	0.332	0.17	0.177	0.21	0.204	0.217	0.236
17:35	30/09/2006	0.322	0.333	0.172	0.178	0.212	0.205	0.219	0.238
23:35	30/09/2006	0.331	0.334	0.171	0.177	0.211	0.204	0.218	0.237
05:35	01/10/2006	0.338	0.337	0.171	0.177	0.211	0.204	0.218	0.236
11:35	01/10/2006	0.338	0.341	0.172	0.178	0.211	0.204	0.218	0.237
17:35	01/10/2006	0.331	0.339	0.172	0.178	0.211	0.204	0.219	0.237
23:35	01/10/2006	0.334	0.339	0.172	0.178	0.211	0.204	0.218	0.237
05:35	02/10/2006	0.338	0.341	0.172	0.178	0.211	0.204	0.218	0.237
11:35	02/10/2006	0.337	0.341	0.172	0.177	0.211	0.204	0.218	0.236
17:35	02/10/2006	0.333	0.342	0.173	0.179	0.212	0.205	0.219	0.237
23:35	02/10/2006	0.336	0.341	0.173	0.178	0.212	0.204	0.218	0.237
05:35	03/10/2006	0.341	0.344	0.173	0.178	0.212	0.204	0.218	0.237
11:35	03/10/2006	0.34	0.344	0.172	0.178	0.211	0.204	0.218	0.236
17:35	03/10/2006	0.335	0.345	0.173	0.179	0.213	0.205	0.219	0.238
23:35	03/10/2006	0.337	0.343	0.173	0.179	0.212	0.205	0.219	0.237
05:35	04/10/2006	0.341	0.345	0.173	0.178	0.212	0.204	0.218	0.237
11:35	04/10/2006	0.34	0.345	0.172	0.178	0.211	0.204	0.218	0.236
17:35	04/10/2006	0.331	0.344	0.173	0.179	0.213	0.205	0.219	0.238
23:35	04/10/2006	0.332	0.342	0.173	0.179	0.212	0.205	0.219	0.237
05:35	05/10/2006	0.333	0.342	0.172	0.179	0.212	0.205	0.219	0.237
11:35	05/10/2006	0.33	0.339	0.171	0.178	0.211	0.204	0.217	0.235



## **Shallow Cover - Temperature Data**

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	12/04/2005	0.8	0.4	0.2	0.2	0.2	0.2	1.2	6.5
1759	12/04/2005	4.6	1.4	0	0	0	0	1	6.3
2359	12/04/2005	1.9	1.2	0	0	0	0	1	6.3
559	13/04/2005	0.6	0.5	0.1	0.1	0.1	0.2	1.2	6.5
1159	13/04/2005	0.5	0.5	0.4	0.4	0.4	0.4	1.4	6.7
1759	13/04/2005	1.4	0.7	0.3	0.3	0.3	0.3	1.4	6.6
2359	13/04/2005	1.2	0.6	0	0	0	0	1	6.3
559	14/04/2005	0.7	0.4	0.1	0.1	0.1	0.1	1.1	6.4
1159	14/04/2005	1.5	0.5	0	0	0	0.1	1.1	6.3
1759	14/04/2005	1.7	0.9	0	0	0	0.1	1.1	6.3
2359	14/04/2005	0.7	0.6	0.1	0.1	0.1	0.1	1.2	6.4
559	15/04/2005	0.3	0.3	0.1	0.1	0.1	0.1	1.2	6.4
1159	15/04/2005	0.5	0.5	0.4	0.4	0.4	0.4	1.5	6.7
1759	15/04/2005	2.5	0.4	-0.2	-0.2	-0.2	-0.2	0.9	6
2359	15/04/2005	1.2	0.9	-0.2	-0.1	-0.1	-0.1	1	6.1
559	16/04/2005	0.1	0.1	-0.2	-0.3	-0.2	-0.2	0.8	6
1159	16/04/2005	1.1	0.5	0.3	0.3	0.3	0.2	1.5	6.6
1759	16/04/2005	5.1	1.9	-0.3	-0.3	-0.3	-0.3	0.8	5.9
2359	16/04/2005	3.3	2	-0.1	-0.1	-0.1	-0.1	1	6.1
559	17/04/2005	2.4	1.6	0.1	0.1	0.1	0.1	1.2	6.3
1159	17/04/2005	3.5	1.6	0.3	0.3	0.2	0.2	1.4	6.5
1759	17/04/2005	5.8	2.5	-0.6	-0.6	-0.6	-0.6	0.5	5.6
2359	17/04/2005	2.9	2.3	0	0	0	0	1	6.1
559	18/04/2005	1	1.1	-0.1	-0.1	-0.1	0	1	6.1
1159	18/04/2005	2.9	1	0.2	0.2	0.2	0.2	1.4	6.4
1759	18/04/2005	8.2	3.4	-0.2	-0.2	-0.2	-0.2	0.8	5.9
2359	18/04/2005	4.2	3.3	-0.1	-0.1	-0.1	-0.1	1	6
559	19/04/2005	1.3	1.4	-0.4	-0.4	-0.3	-0.3	0.7	5.7
1159	19/04/2005	3.7	1.8	0.6	0.6	0.5	0.5	1.8	6.7
1759	19/04/2005	7.6	3.3	-0.4	-0.4	-0.4	-0.4	0.7	5.6
2359	19/04/2005	4.9	3.5	0	-0.3	-0.3	-0.2	0.8	5.8
559	20/04/2005	2.6	2.3	0.1	-0.2	-0.2	-0.2	0.9	5.8
1159	20/04/2005	5.7	2.4	0.2	-0.1	-0.1	-0.1	1.1	6
1759	20/04/2005	9.3	4.4	0.2	-0.4	-0.4	-0.4	0.7	5.5
2359	20/04/2005	6	4.4	0.5	-0.3	-0.4	-0.4	0.7	5.5
559	21/04/2005	3.1	3.1	0.7	0	-0.2	-0.2	1	5.8
1159	21/04/2005	5.8	2.9	0.8	0.4	0	0	1.3	6.1
1759	21/04/2005	11.7	5.5	0.7	0	-0.5	-0.5	0.6	5.4
2359	21/04/2005	7.2	5.6	1.5	0.6	-0.3	-0.3	0.8	5.6
559	22/04/2005	3.8	4	1.7	1	0	0	1.1	5.9
1159	22/04/2005	6.9	4.3	2.3	1.7	0.7	0.7	2.1	6.8
1759	22/04/2005	11.3	5.8	1.4	0.6	-0.4	-0.5	0.7	5.4
2359	22/04/2005	8.7	6.2	2.1	1.2	0.1	-0.4	0.7	5.4
559	23/04/2005	6	5.1	2.4	1.5	0.5	-0.3	0.8	5.5
1159	23/04/2005	7.8	4.9	2.5	1.8	1	0	1.3	5.9
1759	23/04/2005	11.4	6.7	2.3	1.5	0.7	-0.5	0.7	5.4
2359	23/04/2005	7.1	6.2	2.9	2.1	1.3	-0.2	0.9	5.6
559	24/04/2005	3.5	4.4	2.9	2.3	1.6	-0.1	1.1	5.7
1159	24/04/2005	6.7	4.1	2.6	2.2	1.7	0	1.4	6
1759	24/04/2005	12	6.6	2.4	1.8	1.3	-0.4	0.8	5.4
2359	24/04/2005	7.2	6.3	3.1	2.4	1.7	-0.3	0.9	5.5
559	25/04/2005	3.4	4.4	3.1	2.6	2.1	-0.1	1.1	5.7
1159	25/04/2005	5.5	4.3	3.4	3.1	2.7	0.5	1.9	6.5
1759	25/04/2005	9.9	5.7	2.4	1.9	1.6	-0.4	0.8	5.4
2359	25/04/2005	6.3	5.5	3	2.5	2	-0.2	1	5.6
559	26/04/2005	3.8	4.3	3.1	2.7	2.3	0	1.2	5.7
1159	26/04/2005	3.3	3.6	3	2.8	2.5	0.2	1.4	6
1759	26/04/2005	4.5	3.7	2.5	2.3	2.2	0	1.3	5.8
2359	26/04/2005	2.5	3.1	2.4	2.2	2	0.1	1.3	5.9
559	27/04/2005	1.4	2.3	2.1	2	1.9	0	1.3	5.8
1159	27/04/2005	1.2	1.9	2	1.9	1.8	0.2	1.5	6
1759	27/04/2005	3.3	2.2	1.5	1.5	1.4	0	1.2	5.8
2359	27/04/2005	1.5	2	1.4	1.4	1.3	0	1.3	5.8
559	28/04/2005	0.8	1.4	1.3	1.3	1.2	0	1.3	5.8
1159	28/04/2005	1.1	1.6	1.7	1.7	1.6	0.5	2	6.4
1759	28/04/2005	0.8	0.9	0.9	0.9	0.9	0	1.3	5.7
2359	28/04/2005	0.6	1	0.9	0.9	0.9	0.1	1.4	5.9
559	29/04/2005	0.4	0.7	0.7	0.8	0.8	0	1.3	5.8
1159	29/04/2005	0.7	1	1.1	1.1	1.1	0.4	1.8	6.2
1759	29/04/2005	0.4	0.6	0.7	0.7	0.7	0.2	1.5	6
2359	29/04/2005	0.3	0.5	0.6	0.6	0.6	0.1	1.5	5.9
559	30/04/2005	0.2	0.4	0.5	0.5	0.5	0.1	1.4	5.8
1159	30/04/2005	0.6	0.8	0.9	0.9	0.9	0.5	2	6.3
1759	30/04/2005	0.4	0.6	0.7	0.7	0.7	0.3	1.7	6.1

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	30/04/2005	0	0.1	0.2	0.2	0.2	-0.1	1.3	5.7
559	01/05/2005	0.1	0.2	0.3	0.3	0.4	0.1	1.5	5.9
1159	01/05/2005	0.5	0.6	0.6	0.6	0.6	0.4	1.8	6.2
1759	01/05/2005	2.1	0.5	0.3	0.3	0.3	0.1	1.5	5.9
2359	01/05/2005	0.9	0.8	0.1	0.1	0.1	-0.1	1.3	5.7
559	02/05/2005	0	0.2	0	0	0	-0.3	1.2	5.5
1159	02/05/2005	0.4	0.5	0.5	0.5	0.4	0.1	1.8	6.1
1759	02/05/2005	7.6	2.4	0.1	0.1	0	-0.2	1.3	5.6
2359	02/05/2005	3.7	2.8	0.1	0	0	-0.4	1.1	5.4
559	03/05/2005	1.4	1.8	0.8	0.7	0.7	0.2	1.6	6
1159	03/05/2005	2.4	1.2	0.8	0.7	0.6	0.1	1.8	6
1759	03/05/2005	10.3	4.2	0.3	0.2	0.1	-0.4	1	5.3
2359	03/05/2005	6.7	4.8	1.3	1	0.7	-0.2	1.3	5.6
559	04/05/2005	3.4	3.6	2	1.8	1.5	0.1	1.6	5.9
1159	04/05/2005	6.1	3.3	2.1	1.9	1.7	0.1	1.8	6
1759	04/05/2005	12	6.2	2.2	1.7	1.4	-0.2	1.3	5.5
2359	04/05/2005	8	6.1	2.8	2.2	1.7	-0.5	1	5.3
559	05/05/2005	4.2	4.7	3.5	3.1	2.7	0	1.6	5.8
1159	05/05/2005	7.3	4.5	3.4	3.2	2.9	0	1.8	6
1759	05/05/2005	9.7	6.3	3.3	2.8	2.4	-0.4	1.1	5.3
2359	05/05/2005	7.7	6.3	4.2	3.7	3.2	0	1.6	5.8
559	06/05/2005	6.1	5.5	4.2	3.8	3.4	-0.2	1.4	5.6
1159	06/05/2005	7.4	5.5	4.5	4.1	3.8	0.1	1.8	6
1759	06/05/2005	10.8	7	4.4	3.9	3.6	-0.2	1.4	5.6
2359	06/05/2005	7.4	6.6	4.7	4.2	3.8	-0.2	1.4	5.5
559	07/05/2005	4.7	5.8	5.4	5.1	4.8	0.5	2.2	6.3
1159	07/05/2005	7.3	5.2	4.8	4.7	4.5	0.4	2.1	6.2
1759	07/05/2005	13.7	7.9	4.5	4	3.8	-0.1	1.3	5.4
2359	07/05/2005	9.3	8	5.2	4.6	4.2	0.1	1.4	5.5
559	08/05/2005	5.3	6.2	5.5	5.2	4.9	0.7	1.7	5.8
1159	08/05/2005	8.5	6	5.3	5.1	4.9	1	2	6
1759	08/05/2005	14.6	8.8	5.3	4.7	4.5	0.8	1.4	5.4
2359	08/05/2005	10.2	9	6.3	5.7	5.2	1.3	1.7	5.7
559	09/05/2005	7.4	7.4	6.4	6	5.6	1.7	1.8	5.7
1159	09/05/2005	7.5	7.4	7	6.8	6.5	2.9	2.8	6.7
1759	09/05/2005	10.4	7.8	6.1	5.9	5.7	2.4	2	5.8
2359	09/05/2005	6.3	7	6	5.8	5.6	2.6	1.9	5.7
559	10/05/2005	3.6	5.5	6	6	5.9	3.2	2.3	6.1
1159	10/05/2005	4	4.7	5.5	5.6	5.7	3.5	2.5	6.2
1759	10/05/2005	11.4	7.2	5.2	5.1	5.2	3.5	2.3	5.9
2359	10/05/2005	7.2	7.1	5.5	5.2	5.1	3.4	2.2	5.7
559	11/05/2005	4.1	5.7	5.8	5.7	5.7	4	2.7	6.2
1159	11/05/2005	6.7	5.3	5.4	5.4	5.4	4	2.8	6.3
1759	11/05/2005	12.4	7.7	5	4.7	4.6	3.3	2	5.5
2359	11/05/2005	9.5	7.9	5.6	5.1	4.9	3.3	2	5.4
559	12/05/2005	6.8	7.2	6.4	6.1	5.9	4.1	2.8	6.1
1159	12/05/2005	9.3	6.8	6.1	5.9	5.8	4.1	2.7	6
1759	12/05/2005	11.2	8.1	5.5	5.1	4.9	3.3	1.8	5
2359	12/05/2005	7.7	7.8	6.6	6.3	6.1	4.3	2.7	5.9
559	13/05/2005	5.4	6.8	6.8	6.7	6.6	4.9	3.2	6.4
1159	13/05/2005	7.4	6.2	6.3	6.3	6.3	4.8	3.1	6.3
1759	13/05/2005	13.8	8.7	5.8	5.6	5.5	4.1	2.4	5.5
2359	13/05/2005	9.7	8.7	6.6	6.1	5.9	4.2	2.5	5.6
559	14/05/2005	6.5	7.6	7.3	7	6.9	5.1	3.3	6.3
1159	14/05/2005	9	7	6.6	6.6	6.5	4.9	3.1	6.1
1759	14/05/2005	14.3	9.3	6.5	6.1	5.9	4.5	2.5	5.5
2359	14/05/2005	11.7	9.8	7.3	6.7	6.4	4.6	2.6	5.5
559	15/05/2005	9.1	8.8	7.6	7.3	6.9	5	2.8	5.7
1159	15/05/2005	11.8	9	7.8	7.5	7.3	5.4	3.3	6.1
1759	15/05/2005	13.7	10.3	7.8	7.3	7	5.2	2.7	5.6
2359	15/05/2005	11.9	10.2	8.2	7.7	7.3	5.3	2.7	5.5
559	16/05/2005	9.6	9.4	8.4	8	7.7	5.6	2.9	5.6
1159	16/05/2005	12.9	9.9	8.8	8.5	8.3	6.3	3.6	6.2
1759	16/05/2005	17	12.3	9	8.5	8.1	6.2	3.2	5.9
2359	16/05/2005	14.2	12.2	9.6	8.9	8.5	6.2	3.1	5.7
559	17/05/2005	11.4	11.2	9.9	9.4	9	6.7	3.3	5.8
1159	17/05/2005	10.9	10.6	10.1	9.9	9.6	7.3	3.9	6.4
1759	17/05/2005	12.6	10.6	9.5	9.3	9.1	7.1	3.5	5.9
2359	17/05/2005	11.4	10.7	9.6	9.3	9.1	7.2	3.5	5.9
559	18/05/2005	10.3	10	9.4	9.2	9	7.1	3.4	5.7
1159	18/05/2005	10.2	9.9	9.5	9.3	9.2	7.4	3.7	5.9
1759	18/05/2005	10.5	10	9.6	9.4	9.3	7.6	4	6.2
2359	18/05/2005	10.5	9.9	9.4	9.2	9.1	7.4	3.8	6
559	19/05/2005	10.1	9.8	9.4	9.2	9.1	7.5	3.8	5.9

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	19/05/2005	11.7	10.3	9.7	9.5	9.4	7.8	4.3
1759	19/05/2005	15.3	11.9	9.8	9.4	9.2	7.6	4.1
2359	19/05/2005	12.8	11.9	10.3	9.8	9.4	7.6	4
559	20/05/2005	10.7	10.9	10.5	10.1	9.8	7.9	4.2
1159	20/05/2005	13.4	10.9	10.4	10.2	10	8.1	4.5
1759	20/05/2005	16.5	13	10.6	10.1	9.8	8	4.2
2359	20/05/2005	12.6	12.3	11	10.5	10.1	8	4
559	21/05/2005	9.7	11.2	11.4	11.1	10.8	8.8	4.7
1159	21/05/2005	14	11.2	10.7	10.6	10.5	8.7	4.7
1759	21/05/2005	15.9	12.4	10	9.4	9.1	7.4	3.3
2359	21/05/2005	12.5	12.6	11.6	11.2	10.8	8.8	4.6
559	22/05/2005	10.3	11.4	11.3	11.1	10.9	9	4.7
1159	22/05/2005	13	11.3	11.2	11.1	11	9.3	5.1
1759	22/05/2005	17.2	13.4	11	10.6	10.4	8.8	4.5
2359	22/05/2005	12.7	13	11.7	11.2	10.9	9	4.8
559	23/05/2005	9.2	11.2	11.6	11.4	11.3	9.4	5.1
1159	23/05/2005	11	10.9	11.2	11.3	11.3	9.8	5.5
1759	23/05/2005	14.1	11.9	10.6	10.5	10.4	9.2	4.9
2359	23/05/2005	11.4	11.9	11.1	10.9	10.8	9.4	5.3
559	24/05/2005	9.2	10.6	10.9	10.9	10.8	9.5	5.4
1159	24/05/2005	9.3	9.9	10.6	10.6	10.7	9.5	5.6
1759	24/05/2005	10.7	10.2	10.1	10.1	10.1	9.2	5.4
2359	24/05/2005	9.1	10	10.3	10.2	10.3	9.3	5.7
559	25/05/2005	7.9	9.2	9.8	9.9	9.9	9.1	5.6
1159	25/05/2005	7.9	8.8	9.6	9.8	9.9	9.1	5.8
1759	25/05/2005	9.2	9.3	9.6	9.7	9.8	9.2	6.1
2359	25/05/2005	7.9	8.9	9.2	9.2	9.3	8.8	5.8
559	26/05/2005	6.3	8	8.9	9	9.1	8.6	5.8
1159	26/05/2005	9.1	8.3	8.9	9.1	9.2	8.8	6.4
1759	26/05/2005	15.1	10.7	8.8	8.6	8.7	8.3	5.9
2359	26/05/2005	11.6	11	9.3	8.9	8.7	7.9	5.7
559	27/05/2005	8.3	10.2	10.4	10.3	10.1	9.1	6.8
1159	27/05/2005	11.6	9.5	9.4	9.4	9.4	8.6	6.2
1759	27/05/2005	17	12.5	9.7	9.3	9.1	8.4	6
2359	27/05/2005	13.1	12.4	10.5	10	9.6	8.4	5.9
559	28/05/2005	10.1	11.5	11.4	11.2	10.9	9.5	6.9
1159	28/05/2005	13.1	11	10.7	10.6	10.5	9.3	6.6
1759	28/05/2005	20.1	14.3	10.9	10.5	10.2	9.1	6.3
2359	28/05/2005	16.2	14.6	11.8	11	10.5	8.9	5.9
559	29/05/2005	12.9	13.5	12.8	12.3	11.9	10	6.8
1159	29/05/2005	16.2	13.3	12.4	12.2	11.9	10.2	6.8
1759	29/05/2005	21.7	16.2	12.7	12.1	11.6	10	6.3
2359	29/05/2005	17.7	16.1	13.5	12.7	12	9.9	6
559	30/05/2005	14.5	15.2	14.6	14.1	13.6	11.3	7.1
1159	30/05/2005	18.1	15	13.9	13.6	13.3	11.3	6.9
1759	30/05/2005	23.8	18.1	14.4	13.6	13.1	11.1	6.5
2359	30/05/2005	19.8	17.9	15.2	14.3	13.5	11.1	6.2
559	31/05/2005	16.2	16.7	16	15.5	14.9	12.3	7.1
1159	31/05/2005	20.1	16.9	15.8	15.4	15	12.7	7.3
1759	31/05/2005	26	20.1	16.1	15.3	14.7	12.4	6.8
2359	31/05/2005	21.2	19.6	16.9	16	15.1	12.4	6.5
559	01/06/2005	17.8	18.4	17.7	17.2	16.5	13.7	7.5
1159	01/06/2005	20.3	18	17.2	16.9	16.4	13.9	7.6
1759	01/06/2005	24.7	20.2	17.1	16.5	15.9	13.6	7
2359	01/06/2005	20.4	19.7	17.8	17.1	16.4	13.8	7.1
559	02/06/2005	17.2	18.2	18.1	17.7	17.2	14.6	7.8
1159	02/06/2005	19.7	17.9	17.5	17.3	17	14.8	7.9
1759	02/06/2005	24	20.2	17.6	17.1	16.7	14.6	7.7
2359	02/06/2005	20.6	19.7	17.9	17.3	16.7	14.4	7.5
559	03/06/2005	17.7	18.5	18.2	17.9	17.4	15.1	8.1
1159	03/06/2005	21.4	18.7	17.9	17.7	17.4	15.3	8.5
1759	03/06/2005	26.9	21.7	18.1	17.4	16.9	14.9	7.9
2359	03/06/2005	21.8	20.8	18.8	18	17.4	14.8	7.8
559	04/06/2005	18.4	19.4	19.2	18.8	18.3	15.8	8.6
1159	04/06/2005	18.6	18.6	18.6	18.5	18.2	16	8.8
1759	04/06/2005	23.8	20.1	18.3	18	17.7	15.7	8.6
2359	04/06/2005	20.5	19.9	18.5	18	17.6	15.5	8.4
559	05/06/2005	17.3	18.7	18.9	18.6	18.3	16.2	9.1
1159	05/06/2005	20.9	18.8	18.5	18.4	18.2	16.4	9.6
1759	05/06/2005	25.8	21.4	18.4	17.8	17.4	15.6	8.7
2359	05/06/2005	21.3	20.8	19.1	18.5	17.8	15.7	8.7
559	06/06/2005	17	18.7	19	18.7	18.4	16.2	9.1
1159	06/06/2005	20.7	18.4	18.2	18.2	18	16.2	9.2
1759	06/06/2005	25.9	22	19.3	18.8	18.4	16.7	9.8

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	06/06/2005	21.5	20.9	19.3	18.7	18.1	16.1	9.1
559	07/06/2005	18.1	19.6	19.8	19.6	19.2	17.2	10.2
1159	07/06/2005	21.6	19.3	18.9	18.8	18.6	16.9	10.1
1759	07/06/2005	26.6	22.3	19.2	18.6	18.1	16.5	9.6
2359	07/06/2005	21.9	21.4	19.8	19.2	18.6	16.5	9.5
559	08/06/2005	18.9	20.2	20.3	20	19.6	17.6	10.5
1159	08/06/2005	23	20.6	20.1	20	19.7	18	11.2
1759	08/06/2005	28.3	23.6	20.3	19.6	19.1	17.4	10.4
2359	08/06/2005	23.8	22.8	20.8	20.1	19.4	17.2	10.1
559	09/06/2005	20.1	20.9	20.7	20.3	19.9	17.6	10.4
1159	09/06/2005	23.2	21	20.3	20.1	19.8	17.9	10.6
1759	09/06/2005	25.6	23.3	21.2	20.7	20.2	18.4	11.1
2359	09/06/2005	21.8	21.8	20.8	20.3	19.8	17.8	10.5
559	10/06/2005	19	20.5	20.8	20.6	20.3	18.4	11.1
1159	10/06/2005	21.1	20.5	20.5	20.5	20.3	18.7	11.6
1759	10/06/2005	24.4	21.9	20.2	19.8	19.5	18.1	11
2359	10/06/2005	20.2	21	20.4	20.1	19.8	18.1	11.1
559	11/06/2005	17.1	19.4	20.2	20.3	20.2	18.7	11.8
1159	11/06/2005	18.4	18.6	19.2	19.4	19.5	18.4	11.7
1759	11/06/2005	19.1	19.1	18.9	18.9	18.8	18	11.5
2359	11/06/2005	16.5	18.2	18.6	18.7	18.7	17.8	11.6
559	12/06/2005	14.9	17	18.1	18.4	18.4	17.7	11.8
1159	12/06/2005	14.9	16.4	17.5	17.8	18	17.5	11.9
1759	12/06/2005	15.3	16.4	17.2	17.4	17.6	17.3	12.1
2359	12/06/2005	14.4	15.9	16.7	17	17.1	16.9	12
559	13/06/2005	13.6	15.3	16.4	16.6	16.8	16.7	12.1
1159	13/06/2005	13.9	15	16	16.2	16.4	16.4	12.2
1759	13/06/2005	16.9	15.8	15.6	15.7	15.8	15.8	12
2359	13/06/2005	16	16.2	16.1	16	16	15.9	12.2
559	14/06/2005	14.8	15.6	16	16.1	16.1	15.8	12.3
1159	14/06/2005	16.2	16	16.3	16.4	16.4	16.2	12.9
1759	14/06/2005	17.4	16.2	15.5	15.3	15.3	15.1	11.8
2359	14/06/2005	15.9	16.4	16.1	16	15.9	15.5	12.2
559	15/06/2005	13.7	15.3	16	16	16	15.6	12.4
1159	15/06/2005	14.3	15.2	15.9	16.1	16.2	15.9	12.9
1759	15/06/2005	16.7	15.8	15.5	15.6	15.6	15.5	12.6
2359	15/06/2005	15	15.7	15.7	15.6	15.6	15.3	12.5
559	16/06/2005	13	14.7	15.4	15.6	15.6	15.4	12.5
1159	16/06/2005	13.6	14.3	15	15.3	15.4	15.3	12.7
1759	16/06/2005	16.6	15.3	15	15	15	15.1	12.6
2359	16/06/2005	14.8	15.3	14.9	14.8	14.7	14.6	12.1
559	17/06/2005	11.9	14.2	15.1	15.3	15.3	15.1	12.7
1159	17/06/2005	14.7	13.6	14.1	14.4	14.6	14.7	12.4
1759	17/06/2005	19.2	16.2	14.7	14.6	14.5	14.6	12.5
2359	17/06/2005	16.6	16.5	15.3	14.9	14.8	14.4	12.3
559	18/06/2005	14	15.7	16	16	15.9	15.5	13.3
1159	18/06/2005	16.3	14.8	15	15.1	15.2	14.9	12.8
1759	18/06/2005	21.8	18.1	15.5	15.2	15	14.7	12.6
2359	18/06/2005	18.8	18	16.2	15.7	15.3	14.5	12.3
559	19/06/2005	15.7	17.1	17.1	16.9	16.6	15.7	13.3
1159	19/06/2005	17.7	15.9	15.7	15.7	15.6	14.9	12.4
1759	19/06/2005	18.9	17.2	16.2	15.9	15.7	15.1	12.5
2359	19/06/2005	16.9	17.1	16.4	16.1	15.9	15	12.3
559	20/06/2005	14	16.2	17.1	17.2	17	16.2	13.5
1159	20/06/2005	16.5	15.3	15.7	15.9	16	15.5	12.8
1759	20/06/2005	23.9	19.2	16.5	16	15.7	15.3	12.5
2359	20/06/2005	20.6	19.5	17.6	16.9	16.3	15.2	12.3
559	21/06/2005	17.1	18	18	17.7	17.3	16	12.8
1159	21/06/2005	19.8	18.2	17.9	17.8	17.6	16.5	13.3
1759	21/06/2005	23.7	20	17.9	17.4	17.1	16	12.5
2359	21/06/2005	21.1	20.3	18.8	18.1	17.5	16.1	12.4
559	22/06/2005	18.3	19.3	19.4	19.1	18.7	17.1	13.3
1159	22/06/2005	17.1	17.8	18.3	18.2	18.1	16.9	12.8
1759	22/06/2005	15.4	16.9	17.8	17.9	17.8	16.9	12.9
2359	22/06/2005	14.2	16	17.2	17.4	17.5	16.9	13
559	23/06/2005	13.2	15.1	16.5	16.8	17	16.7	13
1159	23/06/2005	12.3	14.3	15.8	16.3	16.5	16.5	13.2
1759	23/06/2005	12.2	13.8	15.2	15.7	15.9	16.2	13.3
2359	23/06/2005	11.6	13.3	14.6	15	15.3	15.7	13.1
559	24/06/2005	10.3	13	14.7	15.1	15.5	16	13.9
1159	24/06/2005	13.4	12.7	13.6	14.1	14.4	15.1	13.5
1759	24/06/2005	18.1	15.4	14.1	13.9	13.9	14.6	13.2
2359	24/06/2005	16.1	15.8	14.9	14.6	14.4	14.5	13.2
559	25/06/2005	13.8	14.8	15	15	14.9	14.7	13.3

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	25/06/2005	13.3	14	14.6	14.7	14.7	14.7	13.3
1759	25/06/2005	14.3	14.5	14.7	14.8	14.8	14.9	13.6
2359	25/06/2005	13.3	14	14.1	14.2	14.2	14.3	12.9
559	26/06/2005	11.7	13.4	14.3	14.6	14.6	14.8	13.5
1159	26/06/2005	14.1	13.5	14	14.2	14.4	14.7	13.6
1759	26/06/2005	18.5	16	14.6	14.4	14.3	14.6	13.6
2359	26/06/2005	16	15.8	14.8	14.5	14.3	14.1	13
559	27/06/2005	13.3	15	15.5	15.4	15.3	15	13.9
1159	27/06/2005	15.3	14.5	14.7	14.8	14.8	14.7	13.6
1759	27/06/2005	20.4	16.8	15	14.6	14.4	14.3	13
2359	27/06/2005	18.3	17.4	16	15.5	15	14.4	13
559	28/06/2005	16.6	17.5	17.4	17.1	16.8	15.9	14.4
1159	28/06/2005	17	16.3	16.2	16.1	15.9	15.3	13.5
1759	28/06/2005	17.6	16.9	16.2	15.9	15.6	15	13.1
2359	28/06/2005	15.9	16.5	16.5	16.3	16.1	15.4	13.3
559	29/06/2005	14.7	15.7	16.1	16.2	16.1	15.5	13.4
1159	29/06/2005	15.3	15.5	15.9	16	16	15.6	13.6
1759	29/06/2005	19.9	17.1	15.7	15.5	15.4	15.1	13
2359	29/06/2005	18.3	17.8	16.6	16.1	15.8	15.1	13
559	30/06/2005	15.8	16.8	16.9	16.8	16.6	15.8	13.5
1159	30/06/2005	18.5	17	16.9	16.8	16.7	16	13.9
1759	30/06/2005	24.5	20	17.4	16.7	16.3	15.5	13.1
2359	30/06/2005	21.8	20.4	18.5	17.7	17	15.6	12.9
559	01/07/2005	19	19.8	19.5	19.2	18.7	17	14.1
1159	01/07/2005	20.4	19.2	19	18.8	18.5	17.1	14
1759	01/07/2005	24.8	21.4	19.3	18.6	18.1	16.8	13.2
2359	01/07/2005	21.6	21.3	20.4	19.6	18.9	17.1	13.3
559	02/07/2005	19	20.3	20.7	20.4	20	18.2	14.2
1159	02/07/2005	20.2	19.5	19.7	19.6	19.4	18.1	13.9
1759	02/07/2005	22.8	21	19.6	19.1	18.7	17.4	13.1
2359	02/07/2005	18.9	20	20.4	20.1	19.7	18.2	13.8
559	03/07/2005	17.4	18.9	19.7	19.8	19.6	18.4	13.9
1159	03/07/2005	17.9	18.6	19.3	19.4	19.4	18.5	14.3
1759	03/07/2005	21	19.6	19.2	19	18.8	18.1	14
2359	03/07/2005	19.7	19.8	19.6	19.2	18.9	17.9	13.8
559	04/07/2005	17.9	19.1	19.6	19.5	19.3	18.4	14.3
1159	04/07/2005	18.5	18.5	19	19	19	18.2	14.3
1759	04/07/2005	20.5	19.5	19.3	19	18.8	18.1	14.1
2359	04/07/2005	19.2	19.4	19.3	19	18.7	17.8	13.9
559	05/07/2005	17.8	19	19.6	19.6	19.4	18.6	14.7
1159	05/07/2005	19.1	18.7	19	19	19	18.4	14.7
1759	05/07/2005	21.9	19.9	19.2	18.8	18.6	17.9	14.3
2359	05/07/2005	21.7	20.8	19.9	19.4	19	17.9	14.2
559	06/07/2005	19.8	20.3	20.1	19.9	19.6	18.3	14.5
1159	06/07/2005	21	20	19.9	19.7	19.5	18.4	14.6
1759	06/07/2005	22.4	21.1	20.3	19.7	19.3	18.2	14.2
2359	06/07/2005	20.2	20.8	20.8	20.4	20.1	18.7	14.6
559	07/07/2005	18.5	20	20.7	20.7	20.5	19.3	15.1
1159	07/07/2005	18.6	19.1	19.9	20	20	19.2	15.1
1759	07/07/2005	19.9	19.4	19.4	19.3	19.2	18.6	14.5
2359	07/07/2005	19	19.5	19.6	19.5	19.4	18.6	14.7
559	08/07/2005	17.8	19.1	19.8	19.8	19.8	19.1	15.3
1159	08/07/2005	19.4	18.8	19.3	19.4	19.5	19	15.4
1759	08/07/2005	23.8	21	19.7	19.3	19.1	18.6	15
2359	08/07/2005	22.7	21.7	20.3	19.8	19.5	18.5	14.9
559	09/07/2005	20	20.7	20.5	20.3	20	18.9	15.1
1159	09/07/2005	19.3	20.2	20.5	20.5	20.4	19.4	15.7
1759	09/07/2005	23.2	21	20	19.9	19.7	19	15.2
2359	09/07/2005	21.5	21.3	20.3	20	19.7	18.7	14.9
559	10/07/2005	18.7	20.2	20.6	20.5	20.4	19.4	15.6
1159	10/07/2005	20.2	19.6	19.9	20	20	19.3	15.6
1759	10/07/2005	23.5	21.4	20.4	20.2	20	19.3	15.6
2359	10/07/2005	21.8	21.6	20.6	20.3	19.9	19	15.2
559	11/07/2005	19	20.6	20.9	20.8	20.7	19.7	15.9
1159	11/07/2005	21.3	20.2	20.4	20.4	20.4	19.7	16.1
1759	11/07/2005	25.4	22.3	20.3	19.7	19.4	18.7	15
2359	11/07/2005	22.6	22.3	21.3	20.9	20.4	19.2	15.4
559	12/07/2005	20	21.5	21.7	21.7	21.4	20.2	16.3
1159	12/07/2005	22.1	20.9	21	21	20.9	20	16.4
1759	12/07/2005	28.3	24.1	21.7	21	20.7	19.8	15.9
2359	12/07/2005	25.4	24.3	22.3	21.6	21	19.6	15.6
559	13/07/2005	21.5	22.6	22.2	22	21.6	20	15.7
1159	13/07/2005	22.9	22	21.9	21.9	21.7	20.4	16.1
1759	13/07/2005	25.2	23.6	22.2	21.8	21.4	20.2	15.8

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	13/07/2005	23	23.1	22.4	22	21.6	20.3	15.7
559	14/07/2005	20.3	21.8	22.3	22.3	22.1	20.8	16.2
1159	14/07/2005	21.8	21.6	22	22.1	22	21.1	16.8
1759	14/07/2005	25.9	23.7	22.4	22.1	21.8	21	16.6
2359	14/07/2005	23.6	23.3	22.2	21.8	21.5	20.3	15.9
559	15/07/2005	20.9	22.3	22.5	22.5	22.2	21.1	16.7
1159	15/07/2005	22.4	21.8	22	22.1	22	21.1	16.9
1759	15/07/2005	25.8	23.6	22.1	21.6	21.3	20.5	16.2
2359	15/07/2005	23.3	23.3	22.7	22.3	21.9	20.7	16.3
559	16/07/2005	21.1	22.2	22.4	22.3	22.1	21	16.5
1159	16/07/2005	20.6	21.2	21.6	21.7	21.6	20.8	16.4
1759	16/07/2005	22.8	22.2	21.9	21.8	21.7	21.1	16.8
2359	16/07/2005	21.7	22.1	21.7	21.6	21.4	20.7	16.5
559	17/07/2005	19.8	21.3	21.8	21.9	21.8	21.2	17.1
1159	17/07/2005	21.3	21.2	21.5	21.7	21.7	21.2	17.4
1759	17/07/2005	23.4	21.9	21	20.8	20.6	20.2	16.4
2359	17/07/2005	21.6	22.2	21.7	21.5	21.2	20.5	16.8
559	18/07/2005	19.3	20.9	21.4	21.5	21.4	20.7	17
1159	18/07/2005	19.7	19.9	20.4	20.6	20.6	20.2	16.6
1759	18/07/2005	20.6	21.2	21.3	21.2	21.2	20.8	17.4
2359	18/07/2005	18.5	20.1	20.8	20.9	20.8	20.5	17
559	19/07/2005	16.5	18.9	20.2	20.5	20.6	20.5	17.2
1159	19/07/2005	17.3	18.4	19.7	20.1	20.3	20.4	17.5
1759	19/07/2005	19.8	19.4	19.4	19.5	19.6	19.8	17.1
2359	19/07/2005	18.2	19.3	19.4	19.5	19.5	19.6	17
559	20/07/2005	16.2	18.2	19.1	19.4	19.5	19.6	17.2
1159	20/07/2005	18.4	18.2	18.8	19.1	19.3	19.6	17.6
1759	20/07/2005	21.2	19.8	19.2	19	18.9	19.1	17.1
2359	20/07/2005	18.7	19.6	19.5	19.4	19.2	19.1	17.1
559	21/07/2005	16.1	18.3	19.2	19.4	19.4	19.3	17.3
1159	21/07/2005	17	17.8	18.8	19.1	19.3	19.5	17.7
1759	21/07/2005	19.5	18.7	18.5	18.5	18.5	18.8	17.1
2359	21/07/2005	18.7	19.2	18.9	18.8	18.7	18.8	17.1
559	22/07/2005	16.9	18.3	18.8	18.9	19	19	17.3
1159	22/07/2005	18.2	18	18.4	18.5	18.6	18.8	17.4
1759	22/07/2005	21.2	19.6	18.7	18.4	18.3	18.4	16.9
2359	22/07/2005	19.3	19.7	19.4	19.2	19	18.7	17.2
559	23/07/2005	17.4	18.8	19.3	19.4	19.3	19	17.3
1159	23/07/2005	15.6	17.8	18.8	19.1	19.2	19.1	17.4
1759	23/07/2005	14.3	16.5	18.1	18.6	18.8	19	17.4
2359	23/07/2005	13.6	15.8	17.4	17.9	18.2	18.7	17.4
559	24/07/2005	13.1	15.2	16.8	17.3	17.7	18.4	17.5
1159	24/07/2005	13.5	14.8	16.1	16.7	17.1	18	17.4
1759	24/07/2005	14.7	15.1	15.8	16.1	16.4	17.4	17.3
2359	24/07/2005	14.6	15.5	16	16.2	16.3	17.2	17.3
559	25/07/2005	13.3	15.2	16.2	16.5	16.7	17.5	17.7
1159	25/07/2005	13.7	14.3	15.3	15.7	16	16.9	17.3
1759	25/07/2005	15.9	15.3	15.4	15.5	15.7	16.7	17.2
2359	25/07/2005	14.6	15.5	15.7	15.8	15.9	16.6	17.2
559	26/07/2005	12.9	14.7	15.6	15.9	16	16.7	17.4
1159	26/07/2005	14.4	14.8	15.6	15.9	16.2	17	17.9
1759	26/07/2005	16.2	15.3	15.2	15.2	15.3	16.2	17
2359	26/07/2005	15.4	15.7	15.6	15.5	15.5	16	16.9
559	27/07/2005	13.2	15.2	16	16.2	16.2	16.7	17.5
1159	27/07/2005	14.2	14.6	15.5	15.8	16	16.6	17.6
1759	27/07/2005	18.2	16.1	15.4	15.2	15.2	15.9	16.8
2359	27/07/2005	16.6	16.7	16.1	15.9	15.7	16	16.8
559	28/07/2005	14.6	16	16.4	16.4	16.4	16.6	17.1
1159	28/07/2005	14.7	15.1	15.6	15.8	15.9	16.3	16.7
1759	28/07/2005	15.5	15.8	16	16.1	16.1	16.6	17.1
2359	28/07/2005	15.2	15.6	15.8	15.8	15.9	16.3	16.7
559	29/07/2005	14	15.2	15.8	15.9	16	16.4	16.9
1159	29/07/2005	16.5	15.6	15.8	16	16.1	16.5	17.2
1759	29/07/2005	19.1	17.2	16.3	16	15.8	16.2	16.7
2359	29/07/2005	18.2	17.7	16.8	16.5	16.3	16.2	16.6
559	30/07/2005	16.3	17	16.9	16.8	16.7	16.5	16.7
1159	30/07/2005	17.6	17.1	17.2	17.1	17.1	17	17.2
1759	30/07/2005	20	18.1	17.3	17	16.8	16.7	16.7
2359	30/07/2005	19.3	18.7	17.7	17.3	17	16.7	16.4
559	31/07/2005	17.3	18	17.8	17.7	17.6	17.2	16.7
1159	31/07/2005	17.5	18	18.1	18.1	18.1	17.8	17.4
1759	31/07/2005	21.1	19	17.9	17.7	17.5	17.3	16.7
2359	31/07/2005	19.7	19.3	18.2	17.8	17.5	17.1	16.3
559	01/08/2005	17.5	18.5	18.4	18.3	18.2	17.6	16.6

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	01/08/2005	19.7	18.7	18.5	18.5	18.4	18.1	17.1
1759	01/08/2005	22.8	20	18.5	18.1	17.8	17.5	16.3
2359	01/08/2005	20.3	20.3	19.5	19	18.7	17.9	16.6
559	02/08/2005	18	19.1	19.3	19.1	19	18.2	16.6
1159	02/08/2005	17.3	18	18.6	18.7	18.7	18.2	16.6
1759	02/08/2005	18	18.3	18.7	18.7	18.7	18.4	16.8
2359	02/08/2005	16.9	18	18.4	18.5	18.4	18.3	16.6
559	03/08/2005	15.7	17.2	18	18.3	18.3	18.3	16.8
1159	03/08/2005	16.1	17	17.8	18.1	18.2	18.4	17.1
1759	03/08/2005	19.6	18.2	17.9	17.9	17.9	18.2	17
2359	03/08/2005	19	18.8	18.1	18	17.8	17.8	16.7
559	04/08/2005	16.8	18.1	18.4	18.4	18.4	18.2	17.1
1159	04/08/2005	18.2	17.6	17.9	18	18.1	18.1	17.1
1759	04/08/2005	21.4	19.2	18.3	18	17.8	17.8	16.8
2359	04/08/2005	20.7	19.9	18.9	18.5	18.2	17.9	16.7
559	05/08/2005	19.1	19.6	19.4	19.2	19	18.5	17.2
1159	05/08/2005	20.2	19.5	19.5	19.4	19.3	18.8	17.6
1759	05/08/2005	21.9	20.5	19.7	19.3	19.1	18.6	17.2
2359	05/08/2005	20.7	20.4	19.6	19.3	19	18.3	16.7
559	06/08/2005	18.4	19.5	19.7	19.6	19.5	18.8	17
1159	06/08/2005	20	19.5	19.7	19.7	19.6	19.2	17.6
1759	06/08/2005	23.2	21.1	20.2	19.8	19.6	19.2	17.4
2359	06/08/2005	21.8	21.2	20.2	19.8	19.5	18.8	16.9
559	07/08/2005	19.7	20.3	20.1	20	19.8	19	17
1159	07/08/2005	19	19.6	19.9	19.9	19.8	19.2	17.1
1759	07/08/2005	20	19.7	19.6	19.5	19.4	19.1	17
2359	07/08/2005	19.3	19.8	19.8	19.8	19.7	19.3	17.2
559	08/08/2005	17.9	19.3	19.9	20	19.9	19.7	17.6
1159	08/08/2005	17.4	18.3	19.1	19.3	19.3	19.3	17.4
1759	08/08/2005	20.5	19.6	19.5	19.5	19.4	19.5	17.7
2359	08/08/2005	19.2	19.7	19.5	19.4	19.3	19.1	17.4
559	09/08/2005	17.3	18.7	19.2	19.3	19.3	19.2	17.4
1159	09/08/2005	18.1	18.3	19	19.2	19.2	19.3	17.7
1759	09/08/2005	20.6	19.3	19	18.9	18.9	19	17.4
2359	09/08/2005	19	19.5	19.2	19.1	18.9	18.8	17.3
559	10/08/2005	17.2	18.6	19.2	19.3	19.3	19.2	17.7
1159	10/08/2005	17.7	18	18.6	18.8	18.9	18.9	17.7
1759	10/08/2005	20.3	19.2	18.8	18.7	18.6	18.7	17.4
2359	10/08/2005	18.5	19.2	19.3	19.2	19.1	18.9	17.6
559	11/08/2005	16.8	18.2	19	19.1	19.1	19	17.6
1159	11/08/2005	16	17.4	18.5	18.7	18.8	18.9	17.6
1759	11/08/2005	16.5	17.1	17.9	18.1	18.3	18.6	17.4
2359	11/08/2005	16	17.3	18	18.2	18.4	18.8	17.7
559	12/08/2005	14.3	16.4	17.6	18	18.2	18.6	17.7
1159	12/08/2005	14.8	15.4	16.5	16.9	17.1	17.8	17.2
1759	12/08/2005	17.7	17	17	17.1	17.3	18	17.6
2359	12/08/2005	16.7	17.3	17.5	17.5	17.5	18	17.7
559	13/08/2005	15.1	16.5	17.2	17.4	17.5	18	17.7
1159	13/08/2005	15.6	15.8	16.6	16.9	17	17.6	17.5
1759	13/08/2005	17.6	16.8	16.8	16.9	16.9	17.5	17.5
2359	13/08/2005	16.6	17.1	17.1	17.1	17.1	17.6	17.6
559	14/08/2005	15	16.4	17	17.2	17.3	17.7	17.8
1159	14/08/2005	15	15.9	16.8	17.1	17.3	17.8	18
1759	14/08/2005	16.5	16.2	16.4	16.5	16.7	17.3	17.5
2359	14/08/2005	15	16.2	16.6	16.7	16.8	17.3	17.6
559	15/08/2005	12.9	15.2	16.5	16.9	17.1	17.6	18
1159	15/08/2005	13.3	14.4	15.7	16.1	16.4	17.3	17.7
1759	15/08/2005	15	14.9	15.3	15.5	15.7	16.7	17.3
2359	15/08/2005	14.7	15.4	15.7	15.8	15.9	16.8	17.5
559	16/08/2005	13.4	14.9	15.7	15.9	16.1	16.9	17.7
1159	16/08/2005	13.9	14.6	15.5	15.8	16	16.9	17.8
1759	16/08/2005	15.1	15.1	15.3	15.5	15.6	16.5	17.6
2359	16/08/2005	14.4	15.1	15.4	15.5	15.6	16.4	17.5
559	17/08/2005	13.6	14.7	15.4	15.6	15.7	16.5	17.6
1159	17/08/2005	13.6	14.7	15.5	15.8	16	16.7	18
1759	17/08/2005	14	14.4	14.8	15.1	15.3	16.1	17.4
2359	17/08/2005	13.1	14.3	14.9	15.1	15.3	16.2	17.5
559	18/08/2005	12.4	13.7	14.7	14.9	15.2	16.1	17.4
1159	18/08/2005	12.4	13.4	14.3	14.7	15	15.9	17.4
1759	18/08/2005	13	13.6	14.1	14.4	14.6	15.7	17.3
2359	18/08/2005	12.5	13.5	14	14.3	14.5	15.6	17.3
559	19/08/2005	12	13.2	13.9	14.2	14.4	15.5	17.3
1159	19/08/2005	12.6	13.1	13.7	14.1	14.3	15.4	17.4
1759	19/08/2005	13.6	13.5	13.7	13.9	14.1	15.2	17.2



MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	19/08/2005	13	13.5	13.7	13.8	13.9	14.9	17
559	20/08/2005	11.6	13	13.7	14	14.1	15	17.1
1159	20/08/2005	12.7	13	13.7	14	14.2	15.2	17.4
1759	20/08/2005	15	13.9	13.6	13.6	13.7	14.7	16.9
2359	20/08/2005	14.6	14.4	14	14	13.9	14.6	16.8
559	21/08/2005	13.7	14.2	14.3	14.3	14.3	14.9	16.9
1159	21/08/2005	15	14.8	14.9	15	15.1	15.6	17.8
1759	21/08/2005	17.8	15.5	14.4	14.1	14	14.6	16.4
2359	21/08/2005	16.7	16.2	15.5	15.2	15	15.1	16.8
559	22/08/2005	15.3	15.6	15.5	15.4	15.3	15.3	16.7
1159	22/08/2005	15.7	15.6	15.8	15.8	15.7	15.8	17.2
1759	22/08/2005	17.8	16.3	15.7	15.5	15.3	15.4	16.6
2359	22/08/2005	16.7	16.6	16.3	16	15.8	15.7	16.6
559	23/08/2005	14.9	15.8	16.2	16.2	16.1	16	16.6
1159	23/08/2005	15.5	15.4	15.8	15.9	16	16	16.7
1759	23/08/2005	17.8	16.4	15.8	15.6	15.5	15.6	16.2
2359	23/08/2005	16.2	16.5	16.5	16.3	16.2	16.1	16.5
559	24/08/2005	14.4	15.6	16.1	16.2	16.3	16.2	16.5
1159	24/08/2005	15.1	15.4	16.1	16.3	16.4	16.6	17
1759	24/08/2005	17	16	15.6	15.6	15.6	15.9	16.3
2359	24/08/2005	16	16.4	16.1	16	16	16.2	16.5
559	25/08/2005	13.9	15.5	15.9	16.1	16.2	16.3	16.7
1159	25/08/2005	14.8	15	15.7	16	16.1	16.5	17.1
1759	25/08/2005	18.2	16.1	15.4	15.3	15.3	15.7	16.2
2359	25/08/2005	17.1	16.9	15.9	15.7	15.6	15.7	16.2
559	26/08/2005	14.9	16.1	16.2	16.2	16.2	16.2	16.6
1159	26/08/2005	15.8	15.8	16.1	16.3	16.4	16.5	17.1
1759	26/08/2005	19.8	17.3	16.1	15.9	15.8	16	16.5
2359	26/08/2005	19.2	18.2	16.8	16.4	16.1	15.9	16.3
559	27/08/2005	17.2	17.7	17.2	17	16.8	16.4	16.6
1159	27/08/2005	18.2	17.6	17.4	17.4	17.3	17	17.2
1759	27/08/2005	21.6	18.7	17.2	16.8	16.5	16.2	16.2
2359	27/08/2005	20.7	19.8	18.2	17.7	17.3	16.7	16.4
559	28/08/2005	18.2	18.9	18.4	18.2	18	17.2	16.7
1159	28/08/2005	19.2	18.7	18.5	18.5	18.4	17.8	17.3
1759	28/08/2005	22.4	19.8	18.4	18	17.8	17.3	16.5
2359	28/08/2005	21.3	20.3	18.9	18.5	18.1	17.3	16.4
559	29/08/2005	19.4	19.7	19.1	18.9	18.6	17.7	16.6
1159	29/08/2005	19.1	19.1	18.9	18.9	18.7	18.1	16.8
1759	29/08/2005	19	19.3	19	18.9	18.8	18.3	16.9
2359	29/08/2005	16.9	18.3	18.6	18.7	18.6	18.2	16.8
559	30/08/2005	14.3	16.8	18.1	18.4	18.5	18.3	17
1159	30/08/2005	13.9	15.8	17.3	17.7	18	18.2	17
1759	30/08/2005	15.4	15.9	16.8	17.1	17.3	17.8	16.9
2359	30/08/2005	14.4	15.8	16.5	16.7	16.9	17.3	16.7
559	31/08/2005	13	15	16.2	16.5	16.7	17.3	16.9
1159	31/08/2005	14.1	14.8	15.9	16.3	16.6	17.3	17.3
1759	31/08/2005	16.3	15.4	15.3	15.4	15.5	16.4	16.5
2359	31/08/2005	14.9	15.8	16	16.1	16.1	16.8	17.1
559	01/09/2005	12.9	14.8	15.8	16	16.2	16.8	17.2
1159	01/09/2005	13.7	14.3	15.3	15.7	15.9	16.7	17.4
1759	01/09/2005	17.1	15.6	15.1	15.1	15.2	16	16.7
2359	01/09/2005	15.3	15.8	15.7	15.7	15.6	16.2	17
559	02/09/2005	13.6	15.2	15.9	16.1	16.1	16.6	17.5
1159	02/09/2005	12.9	14.3	15.3	15.6	15.8	16.5	17.4
1759	02/09/2005	15.3	15	15.1	15.3	15.5	16.3	17.4
2359	02/09/2005	15	15.2	15.1	15.1	15.1	15.9	16.9
559	03/09/2005	13.4	14.5	14.9	15.1	15.2	15.8	17
1159	03/09/2005	14.4	14.4	15	15.2	15.3	16	17.4
1759	03/09/2005	16.8	15.4	14.9	14.8	14.8	15.6	16.8
2359	03/09/2005	15.1	15.5	15.3	15.2	15.2	15.6	16.8
559	04/09/2005	13.2	14.7	15.4	15.5	15.6	16	17.1
1159	04/09/2005	13.4	14	14.9	15.2	15.4	15.9	17.2
1759	04/09/2005	16.9	15.3	15	14.9	15	15.6	16.9
2359	04/09/2005	15.6	15.7	15.2	15.1	15.1	15.5	16.7
559	05/09/2005	13.4	14.8	15.3	15.4	15.5	15.8	17
1159	05/09/2005	14.4	14.5	15.2	15.5	15.6	16.1	17.5
1759	05/09/2005	17.2	15.5	14.8	14.7	14.7	15.3	16.6
2359	05/09/2005	16	16	15.5	15.3	15.2	15.5	16.7
559	06/09/2005	13.8	15.1	15.4	15.5	15.5	15.8	16.9
1159	06/09/2005	14.5	14.6	15.1	15.4	15.5	15.9	17.2
1759	06/09/2005	18	15.7	14.8	14.6	14.6	15.1	16.3
2359	06/09/2005	16.9	16.7	15.9	15.7	15.5	15.6	16.7
559	07/09/2005	14.3	15.5	15.6	15.7	15.6	15.7	16.7

MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
time	date	5	10	20	25	30	40	90	180
1159	07/09/2005	15.2	15.2	15.7	15.9	16	16.2	17.3	16.9
1759	07/09/2005	17.7	16.1	15.3	15.2	15.1	15.5	16.5	16.1
2359	07/09/2005	16.7	16.4	15.8	15.6	15.5	15.6	16.5	16.1
559	08/09/2005	15.1	15.8	15.9	15.9	15.9	15.9	16.7	16.4
1159	08/09/2005	15.3	15.6	15.8	16	16	16.1	17	16.6
1759	08/09/2005	17.5	15.9	15.2	15.2	15.1	15.4	16.2	15.8
2359	08/09/2005	16.5	16.6	16.1	15.9	15.8	15.9	16.6	16.3
559	09/09/2005	14.6	15.9	16.1	16.2	16.2	16.3	17	16.7
1159	09/09/2005	15.2	15.3	15.7	16	16	16.3	17.1	16.8
1759	09/09/2005	17.2	16.1	15.4	15.3	15.3	15.7	16.4	16.1
2359	09/09/2005	16.2	16.3	15.8	15.8	15.7	15.8	16.5	16.3
559	10/09/2005	14.6	15.6	15.8	15.9	15.9	16	16.8	16.5
1159	10/09/2005	14.5	15.2	15.6	15.8	15.9	16.2	16.9	16.6
1759	10/09/2005	15.9	15.2	15	15.1	15.2	15.6	16.4	16.1
2359	10/09/2005	15.3	15.7	15.4	15.5	15.5	15.9	16.7	16.5
559	11/09/2005	14	15.2	15.4	15.6	15.6	16	16.9	16.7
1159	11/09/2005	14.6	15.5	16	16.2	16.3	16.7	17.8	17.6
1759	11/09/2005	16.6	15.1	14.5	14.6	14.6	15.2	16.2	16
2359	11/09/2005	15.4	15.9	15.4	15.3	15.3	15.7	16.7	16.5
559	12/09/2005	13.6	14.8	15.1	15.3	15.3	15.7	16.8	16.5
1159	12/09/2005	13.5	14.5	15	15.2	15.3	15.8	17.1	16.8
1759	12/09/2005	13.9	14.4	14.6	14.7	14.8	15.5	16.6	16.4
2359	12/09/2005	12.9	14.1	14.6	14.8	14.9	15.5	16.7	16.5
559	13/09/2005	11.3	13.2	14.2	14.6	14.7	15.4	16.7	16.5
1159	13/09/2005	11.6	12.7	13.9	14.3	14.6	15.5	17	16.9
1759	13/09/2005	15.2	13.9	13.4	13.6	13.8	14.8	16.4	16.3
2359	13/09/2005	13.5	14.3	13.9	14	14.1	14.9	16.6	16.5
559	14/09/2005	11.5	13.2	13.7	14	14.1	14.9	16.7	16.6
1159	14/09/2005	11.4	13	13.8	14.2	14.4	15.3	17.3	17.2
1759	14/09/2005	13.1	12.8	12.8	13.1	13.3	14.4	16.4	16.4
2359	14/09/2005	11.9	12.9	12.8	13	13.2	14.2	16.3	16.3
559	15/09/2005	9.9	11.9	12.7	13.1	13.3	14.3	16.5	16.5
1159	15/09/2005	10	11.3	12.4	12.9	13.2	14.4	16.9	16.9
1759	15/09/2005	13.4	11.9	11.3	11.6	11.7	13	15.6	15.6
2359	15/09/2005	12.4	13	12.5	12.6	12.6	13.7	16.4	16.4
559	16/09/2005	10.5	12	12.3	12.7	12.8	13.8	16.5	16.6
1159	16/09/2005	10.6	11.5	12.1	12.5	12.7	13.8	16.6	16.8
1759	16/09/2005	12.4	12	11.9	12	12.2	13.4	16.2	16.4
2359	16/09/2005	11.7	12.2	12.2	12.3	12.4	13.4	16.3	16.5
559	17/09/2005	10.4	11.6	12.1	12.3	12.4	13.3	16.2	16.4
1159	17/09/2005	11.3	11.6	12.2	12.5	12.6	13.6	16.7	16.9
1759	17/09/2005	15.2	12.7	11.6	11.6	11.6	12.7	15.6	15.9
2359	17/09/2005	14.1	13.8	12.8	12.6	12.6	13.3	16.1	16.5
559	18/09/2005	12.6	13	12.8	12.9	12.8	13.4	16.1	16.5
1159	18/09/2005	12.9	12.8	12.9	13	13	13.6	16.4	16.9
1759	18/09/2005	16.8	14.1	12.6	12.5	12.4	13	15.6	16.1
2359	18/09/2005	15.1	14.7	13.6	13.4	13.2	13.5	15.9	16.4
559	19/09/2005	13.3	13.9	13.7	13.7	13.6	13.8	16.1	16.6
1159	19/09/2005	12.9	13.2	13.4	13.5	13.5	13.9	16	16.6
1759	19/09/2005	14.8	13.9	13.3	13.3	13.3	13.7	15.8	16.4
2359	19/09/2005	13.6	13.9	13.6	13.6	13.5	13.9	15.8	16.5
559	20/09/2005	12.2	13.1	13.4	13.5	13.6	13.9	15.8	16.5
1159	20/09/2005	12.4	12.9	13.4	13.6	13.7	14.1	16.1	16.8
1759	20/09/2005	14	13.5	13.2	13.2	13.3	13.9	15.8	16.5
2359	20/09/2005	12.6	13.3	13.4	13.4	13.4	13.9	15.8	16.6
559	21/09/2005	11.2	12.5	13.1	13.4	13.5	14	15.9	16.6
1159	21/09/2005	11	12.2	13	13.3	13.5	14.2	16.2	16.9
1759	21/09/2005	12.7	12.1	12.1	12.3	12.5	13.3	15.3	16.1
2359	21/09/2005	12.2	12.8	12.7	12.8	12.9	13.6	15.8	16.5
559	22/09/2005	11	12.3	12.7	12.9	13	13.8	15.9	16.7
1159	22/09/2005	11	12.1	12.8	13.1	13.2	14	16.3	17.1
1759	22/09/2005	13.3	12.4	12	12.2	12.4	13.3	15.5	16.3
2359	22/09/2005	12.2	12.8	12.7	12.7	12.8	13.5	15.9	16.7
559	23/09/2005	10	11.8	12.4	12.7	12.8	13.5	15.8	16.7
1159	23/09/2005	9.9	11	12.1	12.5	12.7	13.6	16.1	17
1759	23/09/2005	12.4	11.9	11.9	12.1	12.3	13.3	15.7	16.6
2359	23/09/2005	11	11.8	12.1	12.2	12.3	13.2	15.7	16.6
559	24/09/2005	9.9	11.2	11.9	12.2	12.3	13.2	15.7	16.7
1159	24/09/2005	10.4	10.7	11.5	11.8	12	12.9	15.7	16.6
1759	24/09/2005	12.8	11.9	11.5	11.6	11.8	12.8	15.5	16.4
2359	24/09/2005	11.8	12	11.9	11.9	11.9	12.8	15.5	16.5
559	25/09/2005	10.9	11.6	11.8	12	12.1	12.8	15.5	16.5
1159	25/09/2005	11.4	11.7	12.2	12.3	12.4	13.2	16	17
1759	25/09/2005	12.3	11.5	11.5	11.6	11.6	12.5	15.2	16.2

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	25/09/2005	11.4	11.9	11.8	11.9	11.9	12.6	15.3	16.3
559	26/09/2005	9.6	11.1	11.8	12	12.2	12.9	15.5	16.6
1159	26/09/2005	9.8	10.4	11.3	11.7	11.9	12.8	15.6	16.7
1759	26/09/2005	12.4	11.4	11.2	11.3	11.5	12.5	15.2	16.4
2359	26/09/2005	11.3	11.7	11.6	11.7	11.7	12.6	15.4	16.6
559	27/09/2005	9.4	10.8	11.4	11.6	11.7	12.5	15.3	16.5
1159	27/09/2005	9.1	10.1	11.1	11.5	11.7	12.7	15.7	16.8
1759	27/09/2005	12.2	10.9	10.6	10.7	10.9	12	14.9	16.1
2359	27/09/2005	10.8	11.2	11	11.1	11.2	12.2	15.2	16.4
559	28/09/2005	8.4	10.2	11	11.3	11.5	12.4	15.4	16.6
1159	28/09/2005	8	9.7	10.9	11.3	11.6	12.6	15.8	17.1
1759	28/09/2005	9.2	9.5	10.1	10.5	10.8	12	15.2	16.5
2359	28/09/2005	9.5	9.9	10.2	10.4	10.6	11.9	15.2	16.5
559	29/09/2005	9.2	9.8	10.2	10.4	10.5	11.7	15.1	16.4
1159	29/09/2005	9.9	9.8	10.2	10.5	10.6	11.7	15.3	16.6
1759	29/09/2005	12.5	10.9	10.1	10.1	10.2	11.3	14.7	16.1
2359	29/09/2005	10.8	11.2	10.9	10.8	10.8	11.6	15.1	16.5
559	30/09/2005	9.4	10.3	10.7	10.9	11	11.8	15.1	16.6
1159	30/09/2005	9.3	10.2	10.8	11	11.2	12	15.4	16.8
1759	30/09/2005	10.3	9.9	10	10.2	10.4	11.4	14.7	16.2
2359	30/09/2005	9	10.2	10.4	10.6	10.7	11.7	15	16.5
559	01/10/2005	7.1	9.2	10.2	10.5	10.7	11.7	15.1	16.6
1159	01/10/2005	6.9	8.6	10	10.5	10.8	12	15.5	17.1
1759	01/10/2005	9.1	9	9.2	9.6	9.9	11.3	14.8	16.4
2359	01/10/2005	8.1	9.1	9.5	9.7	10	11.2	14.9	16.6
559	02/10/2005	7	8.5	9.3	9.7	9.9	11.2	14.9	16.6
1159	02/10/2005	6.8	8.3	9.3	9.7	9.9	11.3	15.2	16.9
1759	02/10/2005	8.1	8.3	8.7	9	9.3	10.8	14.7	16.4
2359	02/10/2005	6.6	8	8.5	8.8	9.1	10.5	14.5	16.3
559	03/10/2005	4.7	7.1	8.4	8.8	9.1	10.6	14.7	16.5
1159	03/10/2005	4.1	6.4	8.1	8.6	9	10.5	14.9	16.8
1759	03/10/2005	7	6.7	7.1	7.6	7.9	9.7	14.1	16
2359	03/10/2005	6.1	7.3	7.6	8	8.3	10	14.5	16.4
559	04/10/2005	4.4	6.3	7.3	7.7	8.1	9.8	14.4	16.4
1159	04/10/2005	4.7	6.1	7.4	7.9	8.2	10	14.9	16.9
1759	04/10/2005	7.9	6.8	6.6	7	7.3	9.1	14.1	16.1
2359	04/10/2005	7	7.3	7.1	7.4	7.6	9.2	14.3	16.3
559	05/10/2005	5.7	6.9	7.3	7.6	7.8	9.4	14.4	16.5
1159	05/10/2005	5.7	6.5	7.3	7.6	7.9	9.5	14.6	16.8
1759	05/10/2005	8.2	7.1	6.7	6.9	7.2	8.8	13.9	16
2359	05/10/2005	7.2	7.5	7.3	7.5	7.6	9	14.1	16.4
559	06/10/2005	5.9	6.9	7.3	7.6	7.8	9.1	14.1	16.4
1159	06/10/2005	5.9	6.7	7.3	7.7	7.9	9.3	14.4	16.7
1759	06/10/2005	8.7	7.3	6.8	6.9	7.1	8.6	13.6	15.9
2359	06/10/2005	8	7.9	7.5	7.6	7.7	8.9	13.9	16.3
559	07/10/2005	6.9	7.4	7.5	7.6	7.8	8.9	13.8	16.2
1159	07/10/2005	7.1	7.8	8.1	8.3	8.4	9.5	14.5	16.9
1759	07/10/2005	8.9	7.8	7.4	7.5	7.7	8.9	13.6	16.1
2359	07/10/2005	8.6	8.3	8	8	8	9	13.7	16.3
559	08/10/2005	8	8.2	8.1	8.2	8.3	9.2	13.7	16.3
1159	08/10/2005	8	8.1	8.3	8.4	8.5	9.4	13.9	16.5
1759	08/10/2005	9.4	8.1	7.7	7.7	7.8	8.7	13	15.7
2359	08/10/2005	7.8	8.5	8.5	8.5	8.5	9.3	13.5	16.3
559	09/10/2005	5.9	7.5	8.4	8.6	8.7	9.6	13.7	16.4
1159	09/10/2005	6	7.1	8.1	8.5	8.7	9.7	13.9	16.7
1759	09/10/2005	9	7.5	7.1	7.3	7.5	8.6	12.8	15.5
2359	09/10/2005	8.4	8.4	8.2	8.3	8.3	9.3	13.5	16.3
559	10/10/2005	7.8	8.2	8.4	8.5	8.6	9.5	13.6	16.5
1159	10/10/2005	7.6	7.8	8.1	8.3	8.4	9.3	13.4	16.3
1759	10/10/2005	8.6	8.1	8	8.1	8.2	9.2	13.2	16.1
2359	10/10/2005	8.4	8.3	8.2	8.2	8.3	9.2	13.1	16
559	11/10/2005	7.9	8.2	8.3	8.4	8.5	9.3	13.2	16.1
1159	11/10/2005	7.6	8	8.4	8.6	8.7	9.5	13.4	16.4
1759	11/10/2005	9.9	8.5	7.9	8	8.1	8.9	12.7	15.6
2359	11/10/2005	8.6	8.9	8.7	8.7	8.7	9.5	13.2	16.2
559	12/10/2005	6.8	8	8.5	8.7	8.8	9.5	13.2	16.2
1159	12/10/2005	6.6	7.7	8.4	8.7	8.8	9.7	13.5	16.4
1759	12/10/2005	7.9	7.4	7.5	7.8	8	9	12.7	15.7
2359	12/10/2005	7.9	8.1	8.2	8.3	8.4	9.4	13.1	16.1
559	13/10/2005	7.7	8	8.1	8.3	8.4	9.3	13.1	16
1159	13/10/2005	7.8	8.4	8.7	8.9	9	9.9	13.7	16.7
1759	13/10/2005	8.9	7.9	7.6	7.7	7.8	8.7	12.5	15.5
2359	13/10/2005	7.9	8.3	8.3	8.3	8.4	9.2	12.9	15.9
559	14/10/2005	6.4	7.7	8.3	8.5	8.6	9.4	13.1	16.1

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	14/10/2005	6.3	7.3	8.2	8.5	8.7	9.6	13.4
1759	14/10/2005	9	7.5	7.2	7.3	7.5	8.5	12.2
2359	14/10/2005	7.6	8.1	8.1	8.2	8.2	9.2	12.9
559	15/10/2005	6.6	7.6	8.1	8.3	8.4	9.3	13.1
1159	15/10/2005	6.7	7.3	7.9	8.1	8.3	9.3	13.2
1759	15/10/2005	7.5	7.4	7.5	7.7	7.9	9	12.8
2359	15/10/2005	7.7	7.7	7.7	7.8	7.9	8.9	12.8
559	16/10/2005	7	7.7	8	8.1	8.2	9.1	13
1159	16/10/2005	6.5	7.4	7.9	8.1	8.2	9.2	13
1759	16/10/2005	6.9	6.9	7.3	7.4	7.6	8.6	12.4
2359	16/10/2005	5.7	7	7.6	7.8	8	8.9	12.8
559	17/10/2005	4.8	6.4	7.4	7.8	8	9.1	12.9
1159	17/10/2005	4.9	6.3	7.3	7.7	8	9.2	13.2
1759	17/10/2005	5.8	6.2	6.7	7	7.3	8.6	12.7
2359	17/10/2005	5	6.2	6.9	7.2	7.4	8.7	12.9
559	18/10/2005	3.8	5.6	6.6	7	7.2	8.6	12.8
1159	18/10/2005	3.4	5.1	6.4	6.8	7.1	8.5	13
1759	18/10/2005	5.8	5.4	5.6	6	6.3	7.8	12.3
2359	18/10/2005	5.4	5.9	6.1	6.4	6.6	8.1	12.6
559	19/10/2005	4.6	5.7	6.3	6.5	6.8	8.2	12.8
1159	19/10/2005	4.8	5.8	6.6	6.9	7.2	8.6	13.4
1759	19/10/2005	5.6	5.5	5.7	6	6.2	7.7	12.4
2359	19/10/2005	5.6	5.9	6.1	6.2	6.4	7.8	12.5
559	20/10/2005	4.9	5.6	6	6.2	6.4	7.7	12.4
1159	20/10/2005	4.7	5.7	6.3	6.6	6.8	8	12.9
1759	20/10/2005	5.3	5.4	5.8	6	6.2	7.6	12.3
2359	20/10/2005	4.4	5.5	6	6.2	6.4	7.7	12.4
559	21/10/2005	3	4.7	5.7	6.1	6.3	7.6	12.3
1159	21/10/2005	2.9	4.6	5.9	6.3	6.6	7.9	12.9
1759	21/10/2005	4.8	4.4	4.6	5	5.3	6.8	11.7
2359	21/10/2005	3.4	4.6	5.1	5.5	5.7	7.2	12.2
559	22/10/2005	2.3	3.9	5	5.3	5.6	7.2	12.2
1159	22/10/2005	2.7	4.4	5.6	6	6.3	7.8	13.1
1759	22/10/2005	3.8	3.7	4.2	4.6	4.9	6.6	11.8
2359	22/10/2005	3.5	4.1	4.4	4.7	5	6.7	12
559	23/10/2005	2.8	3.8	4.4	4.8	5.1	6.7	12.1
1159	23/10/2005	3.1	3.9	4.7	5.1	5.3	6.9	12.5
1759	23/10/2005	5.4	4.3	4.1	4.3	4.6	6.2	11.7
2359	23/10/2005	4.9	4.8	4.6	4.7	4.9	6.3	11.9
559	24/10/2005	4.3	4.6	4.7	4.8	5	6.3	11.8
1159	24/10/2005	4.1	4.6	5	5.2	5.3	6.6	12.1
1759	24/10/2005	5.2	4.3	4	4.1	4.3	5.6	11.1
2359	24/10/2005	4.9	5	4.9	5	5.1	6.3	11.7
559	25/10/2005	4	4.7	4.9	5.1	5.2	6.3	11.6
1159	25/10/2005	4.5	5	5.5	5.7	5.9	7	12.4
1759	25/10/2005	6.7	5.1	4.5	4.6	4.7	6	11.1
2359	25/10/2005	6.7	5.9	5.2	5.2	5.2	6.3	11.3
559	26/10/2005	6	5.9	5.6	5.6	5.7	6.6	11.5
1159	26/10/2005	5.9	5.7	5.8	5.9	5.9	6.8	11.7
1759	26/10/2005	7.8	6.3	5.6	5.6	5.6	6.5	11.2
2359	26/10/2005	6.7	6.5	6	6	5.9	6.7	11.3
559	27/10/2005	5.3	5.9	6	6.1	6.2	6.9	11.3
1159	27/10/2005	4.7	5.6	6.2	6.4	6.6	7.4	11.8
1759	27/10/2005	6.2	5.2	5	5.1	5.2	6.2	10.5
2359	27/10/2005	4.8	5.6	5.8	5.9	6	6.9	11.2
559	28/10/2005	3.2	4.8	5.6	5.9	6.1	7	11.3
1159	28/10/2005	2.8	4.3	5.4	5.8	6	7.1	11.6
1759	28/10/2005	4.8	4.2	4.3	4.6	4.9	6.1	10.6
2359	28/10/2005	3.7	4.5	4.8	5.1	5.3	6.6	11.1
559	29/10/2005	3.2	4.5	5.3	5.6	5.8	7.1	11.7
1159	29/10/2005	2.9	4	4.9	5.2	5.5	6.8	11.5
1759	29/10/2005	4.5	3.9	4	4.2	4.5	5.9	10.7
2359	29/10/2005	3.9	4.5	4.7	4.9	5.1	6.4	11.2
559	30/10/2005	3	4	4.6	4.9	5.1	6.4	11.3
1159	30/10/2005	2.9	3.7	4.4	4.7	4.9	6.3	11.2
1759	30/10/2005	4.1	3.7	3.8	4.1	4.3	5.7	10.7
2359	30/10/2005	3.5	4.1	4.3	4.5	4.7	6	11
559	31/10/2005	2.2	3.5	4.2	4.5	4.7	6	11
1159	31/10/2005	2	3.4	4.4	4.7	5	6.3	11.5
1759	31/10/2005	3.5	3.3	3.5	3.9	4.1	5.6	10.7
2359	31/10/2005	2.7	3.8	4.2	4.5	4.7	6.2	11.3
559	01/11/2005	2.2	3.2	3.8	4.2	4.4	5.9	11.1
1159	01/11/2005	2.1	3.1	3.8	4.1	4.4	5.9	11.1
1759	01/11/2005	2.3	3	3.6	3.9	4.2	5.7	11

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	01/11/2005	2.2	3	3.6	3.9	4.2	5.7	11
559	02/11/2005	2	2.8	3.5	3.7	4	5.5	10.9
1159	02/11/2005	2.1	2.9	3.6	3.8	4.1	5.6	11
1759	02/11/2005	3.1	3	3.3	3.5	3.8	5.3	10.7
2359	02/11/2005	2.9	3.2	3.4	3.6	3.8	5.2	10.7
559	03/11/2005	2.4	3.2	3.6	3.8	4	5.3	10.8
1159	03/11/2005	2.1	2.9	3.5	3.7	4	5.3	10.7
1759	03/11/2005	2.2	2.9	3.4	3.7	3.9	5.3	10.7
2359	03/11/2005	2.3	2.9	3.4	3.6	3.9	5.3	10.7
559	04/11/2005	2.3	2.9	3.4	3.6	3.8	5.2	10.6
1159	04/11/2005	2.5	3	3.5	3.7	3.9	5.3	10.7
1759	04/11/2005	2.5	2.9	3.3	3.6	3.7	5.1	10.5
2359	04/11/2005	2.4	3	3.4	3.6	3.8	5.1	10.5
559	05/11/2005	2.3	3	3.4	3.7	3.8	5.2	10.5
1159	05/11/2005	2.1	2.9	3.4	3.6	3.8	5.2	10.5
1759	05/11/2005	2.2	2.8	3.3	3.5	3.7	5.1	10.4
2359	05/11/2005	2	2.8	3.3	3.5	3.7	5.1	10.4
559	06/11/2005	1.7	2.6	3.2	3.5	3.7	5.1	10.4
1159	06/11/2005	1.7	2.6	3.3	3.5	3.8	5.1	10.5
1759	06/11/2005	1.9	2.4	2.8	3.1	3.3	4.7	10
2359	06/11/2005	1.5	2.5	3.1	3.3	3.5	4.9	10.2
559	07/11/2005	1.6	2.5	3.3	3.5	3.7	5.1	10.5
1159	07/11/2005	1.5	2.5	3.2	3.5	3.7	5.1	10.5
1759	07/11/2005	1.3	2.1	2.8	3.1	3.3	4.8	10.1
2359	07/11/2005	1.2	1.9	2.6	2.9	3.1	4.6	9.9
559	08/11/2005	1.2	2.1	2.8	3.1	3.3	4.7	10.1
1159	08/11/2005	1.3	2.2	2.9	3.1	3.3	4.8	10.3
1759	08/11/2005	0.9	1.6	2.3	2.6	2.8	4.3	9.7
2359	08/11/2005	0.9	1.8	2.5	2.7	3	4.4	9.9
559	09/11/2005	1	1.9	2.6	2.9	3.1	4.6	10.1
1159	09/11/2005	1.1	2	2.7	3	3.2	4.7	10.2
1759	09/11/2005	0.8	1.6	2.3	2.6	2.8	4.3	9.8
2359	09/11/2005	0.8	1.6	2.3	2.6	2.9	4.3	9.9
559	10/11/2005	1.1	1.9	2.5	2.8	3	4.5	10.1
1159	10/11/2005	1	1.8	2.5	2.8	3	4.4	10.1
1759	10/11/2005	1.1	1.3	1.8	2.1	2.3	3.8	9.4
2359	10/11/2005	1.8	1.8	2	2.2	2.5	4	9.5
559	11/11/2005	1.5	2	2.2	2.5	2.7	4.1	9.8
1159	11/11/2005	1.2	1.9	2.3	2.5	2.8	4.2	9.8
1759	11/11/2005	1.3	1.4	1.7	2	2.2	3.6	9.2
2359	11/11/2005	0.9	1.5	1.9	2.2	2.4	3.8	9.4
559	12/11/2005	0.6	1.4	1.9	2.2	2.4	3.8	9.4
1159	12/11/2005	0.7	1.6	2.2	2.4	2.6	4	9.7
1759	12/11/2005	0.3	1	1.6	1.8	2.1	3.5	9.1
2359	12/11/2005	0.5	1.3	1.9	2.2	2.4	3.8	9.4
559	13/11/2005	0.3	1.1	1.8	2	2.3	3.7	9.3
1159	13/11/2005	0.5	1.3	1.9	2.2	2.5	3.9	9.6
1759	13/11/2005	0.3	1	1.7	1.9	2.2	3.7	9.3
2359	13/11/2005	0.3	1.1	1.7	2	2.3	3.7	9.4
559	14/11/2005	0.2	0.9	1.5	1.8	2.1	3.6	9.2
1159	14/11/2005	0.2	1	1.6	1.9	2.1	3.6	9.3
1759	14/11/2005	-0.4	0.2	0.8	1	1.2	2.7	8.5
2359	14/11/2005	0	0.8	1.3	1.6	1.8	3.3	9.1
559	15/11/2005	0	0.8	1.5	1.7	2	3.4	9.2
1159	15/11/2005	-0.2	1	1.6	1.9	2.2	3.6	9.5
1759	15/11/2005	-0.7	0.5	1.1	1.4	1.6	3.1	8.9
2359	15/11/2005	-0.9	0.6	1.2	1.5	1.7	3.2	9
559	16/11/2005	-0.9	0.7	1.3	1.6	1.9	3.3	9.2
1159	16/11/2005	-0.7	0.8	1.5	1.8	2	3.5	9.4
1759	16/11/2005	-0.7	0.5	1.2	1.5	1.7	3.2	9.1
2359	16/11/2005	-0.5	0.6	1.3	1.6	1.8	3.3	9.2
559	17/11/2005	-0.6	0.4	1.1	1.4	1.6	3.1	9
1159	17/11/2005	-0.3	0.7	1.4	1.7	1.9	3.4	9.3
1759	17/11/2005	-0.4	0.5	1.2	1.4	1.7	3.2	9
2359	17/11/2005	-0.4	0.3	1	1.3	1.5	3	8.8
559	18/11/2005	0	0.6	1.2	1.4	1.7	3.1	9
1159	18/11/2005	-0.2	0.2	0.9	1.1	1.4	2.8	8.7
1759	18/11/2005	-0.2	0.1	0.8	1	1.2	2.7	8.5
2359	18/11/2005	-0.1	0.3	0.9	1.2	1.4	2.9	8.7
559	19/11/2005	0	0.4	1	1.3	1.5	2.9	8.7
1159	19/11/2005	0.2	0.6	1.2	1.4	1.6	3	8.9
1759	19/11/2005	-0.4	-0.1	0.5	0.7	0.9	2.4	8.1
2359	19/11/2005	-0.2	0.2	0.8	1.1	1.3	2.7	8.4
559	20/11/2005	0	0.3	0.9	1.1	1.4	2.8	8.5

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	20/11/2005	0.2	0.6	1.2	1.4	1.7	3	8.8	14.2
1759	20/11/2005	-0.1	0.2	0.8	1	1.2	2.6	8.3	13.7
2359	20/11/2005	0	0.3	0.9	1.2	1.4	2.7	8.4	13.9
559	21/11/2005	0.2	0.6	1.1	1.3	1.5	2.9	8.6	14.1
1159	21/11/2005	0.1	0.5	1.1	1.3	1.5	2.9	8.5	14
1759	21/11/2005	0.1	0.5	1.1	1.3	1.5	2.8	8.5	14
2359	21/11/2005	0.2	0.6	1.1	1.3	1.5	2.8	8.5	14
559	22/11/2005	0	0.4	0.9	1.1	1.3	2.6	8.2	13.7
1159	22/11/2005	0.3	0.8	1.3	1.5	1.7	2.9	8.6	14.1
1759	22/11/2005	0	0.4	1	1.2	1.3	2.7	8.2	13.7
2359	22/11/2005	0.1	0.5	1	1.2	1.4	2.7	8.2	13.8
559	23/11/2005	0.1	0.5	1	1.2	1.4	2.7	8.2	13.7
1159	23/11/2005	0.1	0.6	1.1	1.3	1.5	2.8	8.3	13.8
1759	23/11/2005	0.1	0.6	1.1	1.3	1.5	2.8	8.2	13.8
2359	23/11/2005	0.1	0.6	1.1	1.3	1.5	2.7	8.2	13.8
559	24/11/2005	0.2	0.7	1.2	1.4	1.5	2.8	8.3	13.8
1159	24/11/2005	0.3	0.8	1.3	1.5	1.6	2.9	8.4	13.9
1759	24/11/2005	0	0.4	0.9	1.1	1.3	2.5	7.9	13.5
2359	24/11/2005	0	0.5	1	1.2	1.4	2.6	8	13.6
559	25/11/2005	0.2	0.7	1.1	1.3	1.5	2.8	8.1	13.7
1159	25/11/2005	0.2	0.7	1.2	1.4	1.5	2.8	8.1	13.7
1759	25/11/2005	0	0.5	1	1.2	1.4	2.6	7.9	13.5
2359	25/11/2005	0	0.5	0.9	1.2	1.3	2.6	7.9	13.5
559	26/11/2005	-0.2	0.4	0.8	1	1.2	2.4	7.7	13.4
1159	26/11/2005	-0.1	0.6	1	1.2	1.4	2.6	8	13.6
1759	26/11/2005	-0.2	0.4	0.8	1.1	1.3	2.5	7.8	13.4
2359	26/11/2005	-0.4	0.4	0.7	1	1.2	2.4	7.8	13.4
559	27/11/2005	-0.8	0.4	0.8	1	1.2	2.5	7.8	13.4
1159	27/11/2005	-0.7	0.7	1.1	1.4	1.6	2.8	8.3	13.9
1759	27/11/2005	-0.9	0.1	0.4	0.7	0.9	2.3	7.6	13.2
2359	27/11/2005	-1.1	0.2	0.6	0.8	1	2.4	7.8	13.4
559	28/11/2005	-1.3	0.2	0.5	0.8	1	2.4	7.8	13.4
1159	28/11/2005	-1.6	0.1	0.4	0.7	0.9	2.3	7.7	13.3
1759	28/11/2005	-1.8	0	0.3	0.6	0.8	2.2	7.7	13.3
2359	28/11/2005	-2.1	-0.1	0.2	0.5	0.8	2.2	7.7	13.3
559	29/11/2005	-2.4	-0.3	0.1	0.4	0.7	2.1	7.7	13.3
1159	29/11/2005	-2.5	-0.5	0.2	0.5	0.7	2.2	7.7	13.4
1759	29/11/2005	-2.5	-0.8	0	0.3	0.6	2	7.6	13.3
2359	29/11/2005	-2.8	-1	0	0.3	0.5	2	7.6	13.2
559	30/11/2005	-2.9	-1.2	-0.1	0.2	0.4	1.9	7.5	13.2
1159	30/11/2005	-2.8	-1	0.2	0.5	0.7	2.2	7.9	13.5
1759	30/11/2005	-2.9	-1.4	-0.2	0.1	0.4	1.8	7.5	13.2
2359	30/11/2005	-2.9	-1.5	-0.2	0.1	0.4	1.8	7.5	13.2
559	01/12/2005	-2.9	-1.5	-0.3	0.1	0.3	1.8	7.5	13.2
1159	01/12/2005	-2.8	-1.5	-0.2	0.1	0.4	1.9	7.6	13.3
1759	01/12/2005	-3	-1.6	-0.4	0	0.3	1.7	7.4	13.1
2359	01/12/2005	-3	-1.7	-0.4	0	0.3	1.7	7.4	13.1
559	02/12/2005	-3.4	-1.8	-0.5	0	0.2	1.7	7.4	13.1
1159	02/12/2005	-3.5	-1.8	-0.4	0.2	0.3	1.8	7.5	13.3
1759	02/12/2005	-3.7	-2.1	-0.6	0	0.2	1.6	7.3	13.1
2359	02/12/2005	-3.9	-2.2	-0.6	-0.1	0.1	1.6	7.3	13
559	03/12/2005	-3.7	-2.2	-0.7	-0.1	0.1	1.6	7.3	13
1159	03/12/2005	-3.6	-2.1	-0.6	-0.1	0.2	1.6	7.3	13.1
1759	03/12/2005	-3.4	-2.1	-0.8	-0.3	0	1.5	7.2	13
2359	03/12/2005	-3.3	-2	-0.8	-0.2	0.1	1.5	7.2	13
559	04/12/2005	-3.3	-2	-0.8	-0.3	0	1.4	7.1	12.9
1159	04/12/2005	-3.2	-2	-0.7	-0.2	0.1	1.5	7.2	13
1759	04/12/2005	-3.7	-2.2	-0.9	-0.4	0	1.4	7.1	12.9
2359	04/12/2005	-4.7	-2.7	-1.1	-0.6	-0.2	1.2	6.9	12.7
559	05/12/2005	-5.5	-3.1	-1	-0.4	0	1.4	7.1	12.9
1159	05/12/2005	-5.1	-2.9	-0.8	-0.2	0.2	1.6	7.4	13.2
1759	05/12/2005	-4.9	-3.1	-1.2	-0.5	-0.1	1.3	7	12.9
2359	05/12/2005	-5.1	-3.2	-1.4	-0.7	-0.2	1.2	6.9	12.8
559	06/12/2005	-5.4	-3.3	-1.3	-0.5	0	1.4	7.1	13
1159	06/12/2005	-6	-3.7	-1.5	-0.7	-0.2	1.3	7.1	13
1759	06/12/2005	-6	-3.9	-1.8	-1	-0.4	1.1	6.8	12.7
2359	06/12/2005	-6.4	-4	-1.9	-1.1	-0.6	1.1	6.8	12.7
559	07/12/2005	-6.7	-4.1	-1.7	-0.8	-0.3	1.4	7.2	13.1
1159	07/12/2005	-6.4	-4	-1.7	-0.9	-0.4	1.4	7.3	13.2
1759	07/12/2005	-5.4	-3.8	-2.1	-1.3	-0.9	1.1	7	12.9
2359	07/12/2005	-4.2	-3.2	-2	-1.4	-0.9	1.1	7	13
559	08/12/2005	-4.1	-3.2	-2.4	-1.9	-1.5	0.6	6.5	12.5
1159	08/12/2005	-3.6	-2.7	-2	-1.5	-1.3	1	6.9	12.8
1759	08/12/2005	-3.8	-2.7	-2	-1.5	-1.3	0.9	6.9	12.9

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	08/12/2005	-3.5	-2.8	-2.1	-1.7	-1.5	0.8	6.8	12.8
559	09/12/2005	-2.6	-2.4	-2.1	-1.8	-1.6	0.7	6.7	12.7
1159	09/12/2005	-0.9	-1.5	-1.8	-1.6	-1.5	0.7	6.7	12.8
1759	09/12/2005	-0.5	-1	-1.5	-1.4	-1.3	0.7	6.7	12.7
2359	09/12/2005	-0.6	-1	-1.5	-1.4	-1.4	0.5	6.4	12.5
559	10/12/2005	-0.3	-0.7	-1	-1	-1	0.7	6.7	12.8
1159	10/12/2005	-0.1	-0.4	-0.7	-0.7	-0.7	0.9	6.9	13
1759	10/12/2005	-0.1	-0.4	-0.8	-0.8	-0.7	0.7	6.7	12.7
2359	10/12/2005	-0.4	-0.6	-0.9	-0.9	-0.9	0.5	6.4	12.5
559	11/12/2005	0	-0.3	-0.6	-0.6	-0.5	0.8	6.7	12.8
1159	11/12/2005	-0.3	-0.4	-0.6	-0.6	-0.6	0.7	6.6	12.7
1759	11/12/2005	-0.5	-0.7	-0.9	-0.9	-0.9	0.4	6.1	12.2
2359	11/12/2005	-0.9	-0.7	-0.7	-0.7	-0.7	0.6	6.3	12.4
559	12/12/2005	-1.2	-0.7	-0.5	-0.4	-0.4	0.8	6.5	12.7
1159	12/12/2005	-2.1	-1.2	-0.7	-0.6	-0.5	0.7	6.4	12.6
1759	12/12/2005	-1.8	-1.4	-1	-0.8	-0.7	0.5	6.1	12.3
2359	12/12/2005	-1.8	-1.3	-0.9	-0.7	-0.6	0.7	6.4	12.5
559	13/12/2005	-1.7	-1.4	-1.1	-0.9	-0.8	0.6	6.1	12.3
1159	13/12/2005	-1.7	-1.3	-1	-0.8	-0.7	0.7	6.3	12.4
1759	13/12/2005	-1.9	-1.5	-1.2	-1	-0.9	0.5	6.1	12.2
2359	13/12/2005	-2	-1.5	-1	-0.9	-0.7	0.6	6.2	12.4
559	14/12/2005	-1.9	-1.4	-1	-0.8	-0.6	0.8	6.3	12.5
1159	14/12/2005	-2.2	-1.6	-1.2	-1	-0.8	0.6	6.1	12.3
1759	14/12/2005	-2.3	-1.8	-1.4	-1.2	-1.1	0.4	5.9	12.1
2359	14/12/2005	-2.3	-1.8	-1.4	-1.2	-1.1	0.4	5.9	12.1
559	15/12/2005	-2.4	-1.7	-1.2	-1	-0.8	0.6	6.2	12.3
1159	15/12/2005	-2.5	-1.8	-1.3	-1	-0.8	0.6	6.2	12.4
1759	15/12/2005	-2.7	-2.1	-1.6	-1.3	-1.1	0.4	5.9	12.1
2359	15/12/2005	-2.9	-2.1	-1.6	-1.3	-1.1	0.5	6	12.2
559	16/12/2005	-3.2	-2.3	-1.7	-1.4	-1.2	0.4	5.9	12.1
1159	16/12/2005	-3.6	-2.5	-1.7	-1.4	-1.2	0.5	6	12.2
1759	16/12/2005	-4.4	-3	-2.1	-1.7	-1.5	0.3	5.8	12
2359	16/12/2005	-5.2	-3.4	-2.2	-1.8	-1.5	0.3	5.9	12.1
559	17/12/2005	-5.8	-3.8	-2.3	-1.8	-1.6	0.4	5.9	12.1
1159	17/12/2005	-6.4	-4.2	-2.4	-1.9	-1.6	0.4	6.1	12.3
1759	17/12/2005	-5.7	-4.2	-2.8	-2.2	-1.9	0.3	5.9	12.1
2359	17/12/2005	-5.4	-4.2	-3	-2.4	-2.1	0.2	5.8	12
559	18/12/2005	-5.2	-4	-3	-2.5	-2.2	0.2	5.8	12
1159	18/12/2005	-5	-3.8	-2.9	-2.4	-2.1	0.4	6.1	12.3
1759	18/12/2005	-5	-4	-3.2	-2.8	-2.5	0	5.7	11.9
2359	18/12/2005	-4.8	-4	-3.4	-3	-2.7	-0.1	5.6	11.8
559	19/12/2005	-4.7	-3.9	-3.3	-2.9	-2.7	0	5.7	11.9
1159	19/12/2005	-4.2	-3.5	-3	-2.6	-2.4	0.3	6.1	12.3
1759	19/12/2005	-3.9	-3.5	-3.2	-2.9	-2.7	0	5.8	12
2359	19/12/2005	-3.7	-3.4	-3.2	-2.9	-2.8	-0.1	5.7	11.9
559	20/12/2005	-4	-3.4	-3.2	-2.9	-2.8	-0.2	5.6	11.8
1159	20/12/2005	-4.4	-3.5	-3	-2.7	-2.5	-0.1	5.9	12.1
1759	20/12/2005	-4.6	-3.9	-3.4	-3	-2.9	-0.4	5.5	11.7
2359	20/12/2005	-4.4	-3.5	-2.9	-2.6	-2.5	0	6	12.2
559	21/12/2005	-4.5	-3.7	-3.2	-2.9	-2.7	-0.2	5.8	12
1159	21/12/2005	-4.4	-3.8	-3.3	-3	-2.8	-0.3	5.7	12
1759	21/12/2005	-3.1	-3.4	-3.4	-3.1	-2.9	-0.5	5.5	11.8
2359	21/12/2005	-2.7	-3	-3.3	-3.1	-3	-0.6	5.4	11.6
559	22/12/2005	-3	-2.9	-3.1	-2.9	-2.8	-0.6	5.4	11.7
1159	22/12/2005	-3.3	-2.9	-2.8	-2.6	-2.5	-0.4	5.7	12
1759	22/12/2005	-3.1	-2.9	-2.9	-2.7	-2.6	-0.5	5.5	11.8
2359	22/12/2005	-2.8	-2.8	-2.9	-2.7	-2.6	-0.6	5.3	11.6
559	23/12/2005	-2.9	-2.7	-2.7	-2.5	-2.4	-0.5	5.4	11.7
1159	23/12/2005	-3.2	-2.8	-2.7	-2.5	-2.4	-0.5	5.4	11.7
1759	23/12/2005	-3	-2.7	-2.5	-2.4	-2.2	-0.4	5.5	11.8
2359	23/12/2005	-3.1	-2.7	-2.5	-2.4	-2.3	-0.5	5.4	11.7
559	24/12/2005	-3.6	-3.1	-2.8	-2.7	-2.5	-0.8	5.1	11.4
1159	24/12/2005	-3.7	-2.9	-2.4	-2.1	-2	-0.2	5.6	11.9
1759	24/12/2005	-3.5	-3.1	-2.8	-2.6	-2.4	-0.6	5.2	11.6
2359	24/12/2005	-3	-2.7	-2.5	-2.3	-2.2	-0.4	5.5	11.8
559	25/12/2005	-2.7	-2.6	-2.6	-2.5	-2.4	-0.6	5.2	11.6
1159	25/12/2005	-2.8	-2.7	-2.7	-2.5	-2.4	-0.7	5.1	11.4
1759	25/12/2005	-2.7	-2.6	-2.6	-2.5	-2.4	-0.7	5	11.4
2359	25/12/2005	-2.6	-2.3	-2.2	-2.1	-2	-0.4	5.4	11.8
559	26/12/2005	-2.6	-2.4	-2.2	-2.1	-2	-0.4	5.3	11.6
1159	26/12/2005	-2.6	-2.4	-2.4	-2.2	-2.1	-0.5	5.1	11.5
1759	26/12/2005	-2.7	-2.5	-2.4	-2.3	-2.2	-0.7	5	11.3
2359	26/12/2005	-3.2	-2.6	-2.3	-2.2	-2.1	-0.5	5.1	11.4
559	27/12/2005	-3.2	-2.7	-2.3	-2.1	-2	-0.4	5.1	11.5

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	27/12/2005	-3	-2.5	-2.2	-2	-1.8	-0.3	5.3	11.7
1759	27/12/2005	-2.9	-2.5	-2.3	-2.1	-2	-0.4	5.2	11.5
2359	27/12/2005	-2.7	-2.5	-2.3	-2.1	-2	-0.4	5.2	11.5
559	28/12/2005	-2.7	-2.5	-2.3	-2.2	-2	-0.5	5.1	11.4
1159	28/12/2005	-2.4	-2.2	-2	-1.9	-1.8	-0.3	5.3	11.6
1759	28/12/2005	-2.4	-2.3	-2.2	-2.1	-2	-0.5	5	11.4
2359	28/12/2005	-2.3	-2.2	-2.1	-2	-1.9	-0.4	5.1	11.4
559	29/12/2005	-2.4	-2.2	-2.1	-2	-1.9	-0.4	5	11.4
1159	29/12/2005	-2.3	-2	-1.9	-1.8	-1.7	-0.3	5.1	11.5
1759	29/12/2005	-2.3	-2.1	-2.1	-1.9	-1.8	-0.4	5	11.3
2359	29/12/2005	-2.4	-2.1	-2	-1.9	-1.8	-0.4	4.9	11.3
559	30/12/2005	-2.6	-2.2	-2	-1.9	-1.8	-0.4	4.9	11.3
1159	30/12/2005	-2.7	-2.3	-2	-1.9	-1.8	-0.4	4.9	11.2
1759	30/12/2005	-2.7	-2.3	-1.9	-1.8	-1.7	-0.3	5	11.3
2359	30/12/2005	-2.9	-2.4	-2	-1.8	-1.7	-0.3	4.9	11.3
559	31/12/2005	-2.9	-2.4	-2	-1.8	-1.7	-0.3	4.9	11.3
1159	31/12/2005	-2.8	-2.3	-1.9	-1.8	-1.7	-0.3	5	11.4
1759	31/12/2005	-2.6	-2.3	-2	-1.9	-1.7	-0.3	4.9	11.2
2359	31/12/2005	-2.5	-2.3	-2.1	-1.9	-1.8	-0.4	4.8	11.1
559	01/01/2006	-2.4	-2.2	-2	-1.8	-1.8	-0.4	4.8	11.2
1159	01/01/2006	-2.2	-2	-1.9	-1.7	-1.6	-0.3	4.9	11.2
1759	01/01/2006	-2	-2	-1.9	-1.8	-1.7	-0.4	4.8	11.1
2359	01/01/2006	-1.9	-1.9	-1.8	-1.7	-1.6	-0.3	4.8	11.1
559	02/01/2006	-1.9	-1.8	-1.8	-1.7	-1.6	-0.3	4.8	11.1
1159	02/01/2006	-1.9	-1.8	-1.7	-1.6	-1.6	-0.3	4.8	11.1
1759	02/01/2006	-1.8	-1.7	-1.7	-1.6	-1.5	-0.3	4.8	11.1
2359	02/01/2006	-1.8	-1.7	-1.6	-1.6	-1.5	-0.3	4.8	11.1
559	03/01/2006	-1.8	-1.7	-1.6	-1.5	-1.4	-0.3	4.8	11.1
1159	03/01/2006	-1.9	-1.7	-1.6	-1.5	-1.4	-0.3	4.7	11
1759	03/01/2006	-2.3	-1.9	-1.8	-1.6	-1.6	-0.4	4.6	10.8
2359	03/01/2006	-3	-2.2	-1.8	-1.6	-1.5	-0.4	4.6	10.9
559	04/01/2006	-3.1	-2.4	-1.8	-1.6	-1.4	-0.3	4.7	11
1159	04/01/2006	-3.2	-2.5	-2	-1.7	-1.6	-0.4	4.7	10.9
1759	04/01/2006	-3.2	-2.5	-2	-1.8	-1.6	-0.3	4.6	10.9
2359	04/01/2006	-3.2	-2.6	-2	-1.8	-1.6	-0.2	4.7	11
559	05/01/2006	-3.3	-2.6	-2.1	-1.9	-1.7	-0.3	4.7	10.9
1159	05/01/2006	-3.4	-2.7	-2.1	-1.9	-1.8	-0.3	4.7	11
1759	05/01/2006	-3.3	-2.8	-2.2	-2	-1.9	-0.3	4.7	10.9
2359	05/01/2006	-3.1	-2.7	-2.2	-2	-1.9	-0.3	4.7	10.9
559	06/01/2006	-3	-2.6	-2.3	-2.2	-2	-0.4	4.6	10.9
1159	06/01/2006	-2.9	-2.6	-2.4	-2.2	-2.1	-0.5	4.6	10.8
1759	06/01/2006	-2.8	-2.5	-2.3	-2.1	-2	-0.4	4.6	10.8
2359	06/01/2006	-2.8	-2.6	-2.3	-2.2	-2	-0.5	4.5	10.7
559	07/01/2006	-2.8	-2.5	-2.3	-2.1	-2	-0.5	4.6	10.8
1159	07/01/2006	-2.8	-2.4	-2.2	-2	-1.9	-0.4	4.7	10.9
1759	07/01/2006	-2.8	-2.5	-2.3	-2.1	-2	-0.5	4.5	10.7
2359	07/01/2006	-3	-2.6	-2.4	-2.2	-2.1	-0.6	4.5	10.6
559	08/01/2006	-3	-2.6	-2.3	-2.1	-2	-0.5	4.5	10.7
1159	08/01/2006	-2.8	-2.3	-2	-1.8	-1.7	-0.3	4.8	11
1759	08/01/2006	-3.1	-2.7	-2.4	-2.2	-2.1	-0.6	4.5	10.7
2359	08/01/2006	-3.3	-2.9	-2.6	-2.4	-2.3	-0.7	4.3	10.5
559	09/01/2006	-3.5	-3	-2.7	-2.5	-2.3	-0.8	4.3	10.4
1159	09/01/2006	-3.1	-2.6	-2.2	-2.1	-1.9	-0.4	4.7	10.9
1759	09/01/2006	-3.5	-3.1	-2.8	-2.6	-2.5	-0.9	4.2	10.4
2359	09/01/2006	-3.2	-2.7	-2.4	-2.2	-2.1	-0.5	4.6	10.8
559	10/01/2006	-3.2	-2.9	-2.6	-2.4	-2.3	-0.7	4.4	10.6
1159	10/01/2006	-3.2	-2.8	-2.5	-2.3	-2.2	-0.5	4.6	10.7
1759	10/01/2006	-3.2	-2.8	-2.6	-2.4	-2.3	-0.6	4.5	10.6
2359	10/01/2006	-3.1	-2.8	-2.6	-2.4	-2.3	-0.6	4.5	10.6
559	11/01/2006	-3.1	-2.8	-2.6	-2.4	-2.3	-0.7	4.4	10.6
1159	11/01/2006	-3.1	-2.7	-2.5	-2.3	-2.2	-0.6	4.5	10.7
1759	11/01/2006	-3.2	-2.9	-2.6	-2.5	-2.3	-0.7	4.4	10.5
2359	11/01/2006	-3	-2.8	-2.6	-2.4	-2.3	-0.7	4.4	10.5
559	12/01/2006	-3	-2.8	-2.6	-2.4	-2.3	-0.8	4.3	10.4
1159	12/01/2006	-3	-2.7	-2.6	-2.4	-2.3	-0.7	4.3	10.4
1759	12/01/2006	-3	-2.8	-2.6	-2.4	-2.3	-0.8	4.3	10.4
2359	12/01/2006	-3	-2.7	-2.5	-2.3	-2.2	-0.7	4.4	10.5
559	13/01/2006	-3.1	-2.7	-2.5	-2.3	-2.2	-0.7	4.3	10.5
1159	13/01/2006	-3.1	-2.7	-2.5	-2.3	-2.2	-0.7	4.4	10.5
1759	13/01/2006	-3.2	-2.9	-2.6	-2.5	-2.3	-0.8	4.2	10.4
2359	13/01/2006	-3.2	-2.8	-2.6	-2.4	-2.3	-0.8	4.3	10.4
559	14/01/2006	-3	-2.6	-2.4	-2.2	-2.2	-0.6	4.5	10.6
1159	14/01/2006	-3.4	-2.9	-2.6	-2.4	-2.3	-0.8	4.3	10.4
1759	14/01/2006	-3.4	-3	-2.7	-2.5	-2.4	-0.8	4.3	10.4



MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	14/01/2006	-3.4	-3	-2.7	-2.5	-2.4	-0.8	4.2
559	15/01/2006	-3.2	-2.9	-2.6	-2.5	-2.4	-0.8	4.3
1159	15/01/2006	-3.2	-2.9	-2.7	-2.5	-2.4	-0.8	4.2
1759	15/01/2006	-3.2	-2.9	-2.7	-2.5	-2.4	-0.9	4.2
2359	15/01/2006	-3.2	-2.9	-2.7	-2.5	-2.4	-0.9	4.2
559	16/01/2006	-3.3	-3	-2.8	-2.6	-2.5	-0.9	4.1
1159	16/01/2006	-3.4	-2.9	-2.6	-2.5	-2.4	-0.9	4.3
1759	16/01/2006	-4	-3.6	-3.4	-3.2	-3.1	-1.6	3.5
2359	16/01/2006	-3.6	-3.1	-2.7	-2.5	-2.4	-0.8	4.3
559	17/01/2006	-3.9	-3.4	-3	-2.8	-2.6	-1	4
1159	17/01/2006	-3.9	-3.2	-2.8	-2.6	-2.4	-0.8	4.3
1759	17/01/2006	-4.1	-3.5	-3.1	-2.8	-2.7	-1	4.1
2359	17/01/2006	-3.8	-3.4	-3.1	-2.8	-2.7	-1	4.1
559	18/01/2006	-3.7	-3.4	-3.1	-2.9	-2.8	-1.1	4
1159	18/01/2006	-3.5	-3.2	-3	-2.9	-2.8	-1	4.1
1759	18/01/2006	-3.5	-3.2	-3.1	-2.9	-2.8	-1.1	4
2359	18/01/2006	-3.5	-3.3	-3.1	-3	-2.9	-1.2	3.9
559	19/01/2006	-3.6	-3.3	-3.2	-3.1	-3	-1.3	3.8
1159	19/01/2006	-3.4	-3	-2.8	-2.6	-2.5	-0.9	4.3
1759	19/01/2006	-4	-3.7	-3.5	-3.3	-3.2	-1.6	3.6
2359	19/01/2006	-3.9	-3.5	-3.2	-3	-2.9	-1.3	3.9
559	20/01/2006	-3.9	-3.4	-3.1	-2.8	-2.7	-1.1	4.1
1159	20/01/2006	-3.9	-3.4	-3	-2.8	-2.6	-0.9	4.2
1759	20/01/2006	-4.2	-3.7	-3.3	-3.1	-2.9	-1.2	4
2359	20/01/2006	-4.1	-3.5	-3.2	-2.9	-2.8	-1	4.2
559	21/01/2006	-4.6	-3.9	-3.5	-3.3	-3.1	-1.3	3.9
1159	21/01/2006	-3.9	-3.2	-2.8	-2.6	-2.5	-0.6	4.7
1759	21/01/2006	-4.9	-4.1	-3.7	-3.5	-3.3	-1.4	3.9
2359	21/01/2006	-4.6	-3.9	-3.6	-3.3	-3.1	-1.2	4.2
559	22/01/2006	-4.4	-3.8	-3.5	-3.2	-3.1	-1.2	4.3
1159	22/01/2006	-4.4	-3.8	-3.6	-3.3	-3.2	-1.3	4.2
1759	22/01/2006	-4.4	-4.1	-4	-3.7	-3.6	-1.6	3.8
2359	22/01/2006	-3.9	-3.7	-3.6	-3.4	-3.3	-1.4	4
559	23/01/2006	-3.6	-3.4	-3.4	-3.2	-3.1	-1.3	4.2
1159	23/01/2006	-3.6	-3.4	-3.4	-3.3	-3.2	-1.5	4
1759	23/01/2006	-3.6	-3.5	-3.5	-3.4	-3.3	-1.6	3.7
2359	23/01/2006	-3.6	-3.5	-3.6	-3.4	-3.4	-1.7	3.6
559	24/01/2006	-3.5	-3.3	-3.2	-3.1	-3	-1.4	3.9
1159	24/01/2006	-3.3	-2.9	-2.8	-2.7	-2.6	-1.1	4.3
1759	24/01/2006	-3.9	-3.5	-3.3	-3.1	-3	-1.5	3.8
2359	24/01/2006	-4	-3.7	-3.4	-3.2	-3.1	-1.5	3.7
559	25/01/2006	-4	-3.6	-3.4	-3.2	-3.1	-1.5	3.8
1159	25/01/2006	-3.3	-2.7	-2.5	-2.3	-2.2	-0.6	4.8
1759	25/01/2006	-4.4	-4	-3.7	-3.5	-3.4	-1.8	3.5
2359	25/01/2006	-4.3	-4	-3.8	-3.5	-3.4	-1.7	3.5
559	26/01/2006	-4	-3.6	-3.4	-3.2	-3.1	-1.4	3.9
1159	26/01/2006	-4.2	-3.8	-3.6	-3.4	-3.3	-1.6	3.7
1759	26/01/2006	-4.4	-4.1	-3.9	-3.7	-3.6	-1.9	3.5
2359	26/01/2006	-4.3	-3.9	-3.7	-3.5	-3.4	-1.7	3.6
559	27/01/2006	-4.3	-3.8	-3.5	-3.3	-3.2	-1.4	3.9
1159	27/01/2006	-4.3	-3.8	-3.5	-3.2	-3.1	-1.4	4
1759	27/01/2006	-4.7	-4.2	-3.8	-3.6	-3.5	-1.7	3.7
2359	27/01/2006	-4.7	-4.1	-3.8	-3.6	-3.4	-1.6	3.8
559	28/01/2006	-4.9	-4.3	-3.9	-3.6	-3.5	-1.7	3.8
1159	28/01/2006	-4.8	-4.1	-3.7	-3.5	-3.4	-1.5	4
1759	28/01/2006	-5.1	-4.6	-4.2	-4	-3.8	-1.9	3.6
2359	28/01/2006	-4.8	-4.4	-4.2	-4	-3.9	-1.9	3.6
559	29/01/2006	-4.8	-4.4	-4.2	-4	-3.9	-2	3.6
1159	29/01/2006	-4.6	-4.2	-4	-3.8	-3.7	-1.8	3.8
1759	29/01/2006	-4.7	-4.4	-4.2	-4	-3.9	-2	3.5
2359	29/01/2006	-4.7	-4.4	-4.4	-4.2	-4.1	-2.2	3.4
559	30/01/2006	-4.6	-4.3	-4.3	-4.1	-4	-2.1	3.4
1159	30/01/2006	-4.4	-4	-3.9	-3.7	-3.6	-1.8	3.8
1759	30/01/2006	-4.7	-4.4	-4.2	-4	-3.9	-2.1	3.4
2359	30/01/2006	-4.7	-4.3	-4.1	-3.9	-3.8	-2	3.5
559	31/01/2006	-4.8	-4.4	-4.1	-3.9	-3.8	-2	3.5
1159	31/01/2006	-4.3	-3.7	-3.4	-3.2	-3.1	-1.4	4.3
1759	31/01/2006	-5.1	-4.6	-4.3	-4.1	-4	-2.1	3.5
2359	31/01/2006	-4.8	-4.3	-4	-3.8	-3.7	-1.8	3.8
559	01/02/2006	-5.2	-4.7	-4.5	-4.2	-4.1	-2.2	3.4
1159	01/02/2006	-5	-4.4	-4.1	-3.9	-3.8	-1.9	3.8
1759	01/02/2006	-5.6	-5.2	-5	-4.8	-4.7	-2.8	2.9
2359	01/02/2006	-4.9	-4.5	-4.3	-4.1	-4	-2.1	3.6
559	02/02/2006	-5.2	-4.8	-4.6	-4.3	-4.2	-2.3	3.3

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	02/02/2006	-4.9	-4.4	-4.2	-3.9	-3.9	-2	3.8	9.8
1759	02/02/2006	-5.5	-5.2	-5.1	-4.9	-4.9	-3	2.8	8.8
2359	02/02/2006	-5	-4.7	-4.6	-4.4	-4.3	-2.4	3.3	9.3
559	03/02/2006	-5.1	-4.8	-4.6	-4.4	-4.3	-2.5	3.2	9.3
1159	03/02/2006	-5	-4.5	-4.3	-4.1	-4	-2.2	3.7	9.7
1759	03/02/2006	-5.2	-4.8	-4.6	-4.4	-4.3	-2.6	3.2	9.2
2359	03/02/2006	-5.1	-4.9	-4.7	-4.6	-4.5	-2.7	3	9.1
559	04/02/2006	-4.9	-4.6	-4.5	-4.3	-4.2	-2.5	3.2	9.3
1159	04/02/2006	-4.7	-4.4	-4.2	-4	-3.9	-2.2	3.5	9.6
1759	04/02/2006	-5	-4.7	-4.5	-4.4	-4.3	-2.5	3.2	9.2
2359	04/02/2006	-4.7	-4.5	-4.3	-4.2	-4.1	-2.3	3.3	9.4
559	05/02/2006	-4.6	-4.4	-4.2	-4.1	-4	-2.3	3.3	9.4
1159	05/02/2006	-4.5	-4.3	-4.2	-4	-4	-2.3	3.3	9.4
1759	05/02/2006	-4.5	-4.3	-4.2	-4.1	-4	-2.4	3.2	9.2
2359	05/02/2006	-4.4	-4.3	-4.1	-4	-3.9	-2.3	3.2	9.3
559	06/02/2006	-4.5	-4.3	-4.2	-4.1	-4	-2.5	3.1	9.1
1159	06/02/2006	-4.1	-3.8	-3.7	-3.6	-3.5	-2	3.6	9.6
1759	06/02/2006	-4.5	-4.3	-4.1	-4	-3.9	-2.4	3.1	9.1
2359	06/02/2006	-4.2	-3.9	-3.8	-3.7	-3.6	-2.1	3.4	9.5
559	07/02/2006	-4.3	-4.1	-3.9	-3.8	-3.7	-2.2	3.2	9.3
1159	07/02/2006	-4.3	-4	-3.8	-3.7	-3.6	-2.1	3.3	9.4
1759	07/02/2006	-4.5	-4.3	-4	-3.9	-3.8	-2.3	3	9.1
2359	07/02/2006	-4.3	-4	-3.8	-3.7	-3.6	-2.1	3.3	9.3
559	08/02/2006	-4.3	-4	-3.9	-3.7	-3.6	-2.1	3.2	9.3
1159	08/02/2006	-4	-3.7	-3.6	-3.5	-3.4	-1.9	3.4	9.5
1759	08/02/2006	-4.3	-4.2	-4.1	-4	-3.9	-2.5	2.8	8.9
2359	08/02/2006	-4.1	-3.9	-3.9	-3.8	-3.7	-2.3	2.9	9
559	09/02/2006	-3.9	-3.8	-3.7	-3.6	-3.6	-2.2	3	9.1
1159	09/02/2006	-3.5	-3.4	-3.4	-3.3	-3.2	-1.9	3.3	9.4
1759	09/02/2006	-3.7	-3.7	-3.7	-3.6	-3.6	-2.3	2.8	8.9
2359	09/02/2006	-3.9	-3.9	-3.9	-3.8	-3.8	-2.5	2.6	8.6
559	10/02/2006	-3.7	-3.5	-3.5	-3.4	-3.3	-2.1	3	9.1
1159	10/02/2006	-3.4	-3.2	-3	-2.9	-2.9	-1.7	3.4	9.5
1759	10/02/2006	-3.9	-3.6	-3.4	-3.2	-3.2	-1.9	3.1	9.1
2359	10/02/2006	-4.1	-3.8	-3.6	-3.5	-3.4	-2.1	2.8	8.9
559	11/02/2006	-4	-3.7	-3.5	-3.4	-3.3	-2	2.9	9
1159	11/02/2006	-3.9	-3.5	-3.2	-3.1	-3	-1.8	3.3	9.4
1759	11/02/2006	-4.2	-3.9	-3.7	-3.5	-3.4	-2.2	2.8	8.8
2359	11/02/2006	-3.9	-3.7	-3.6	-3.4	-3.3	-2	2.9	8.9
559	12/02/2006	-3.5	-3.2	-3	-2.9	-2.8	-1.6	3.4	9.4
1159	12/02/2006	-3.7	-3.4	-3.2	-3.1	-3	-1.8	3.3	9.4
1759	12/02/2006	-4.2	-4	-3.9	-3.8	-3.7	-2.5	2.5	8.5
2359	12/02/2006	-3.6	-3.5	-3.4	-3.3	-3.2	-2	2.9	9
559	13/02/2006	-3	-2.9	-2.8	-2.7	-2.7	-1.5	3.5	9.5
1159	13/02/2006	-2.3	-2.9	-3.1	-3	-3	-1.8	3.1	9.1
1759	13/02/2006	-1.8	-2.4	-3.1	-3.1	-3.1	-1.9	2.9	8.9
2359	13/02/2006	-2.2	-2.4	-2.9	-2.9	-2.9	-2	2.8	8.8
559	14/02/2006	-3.1	-2.9	-3	-3	-3	-2.1	2.6	8.6
1159	14/02/2006	-3.9	-3.2	-2.9	-2.8	-2.7	-1.9	2.9	9
1759	14/02/2006	-4.4	-3.8	-3.3	-3.1	-3.1	-2.1	2.5	8.5
2359	14/02/2006	-4.6	-3.9	-3.2	-3	-2.9	-1.8	2.7	8.7
559	15/02/2006	-4.9	-4	-3.2	-3	-2.8	-1.7	2.9	8.9
1159	15/02/2006	-5.3	-4.4	-3.5	-3.2	-3	-1.7	2.9	8.9
1759	15/02/2006	-5.9	-4.9	-3.9	-3.6	-3.4	-2	2.7	8.7
2359	15/02/2006	-6.4	-5.1	-3.9	-3.6	-3.4	-1.8	2.9	8.9
559	16/02/2006	-6.8	-5.4	-4.1	-3.8	-3.5	-1.8	3	9
1159	16/02/2006	-6.4	-4.8	-3.4	-3.1	-2.9	-1.1	4.1	10
1759	16/02/2006	-7.6	-6.3	-5.1	-4.7	-4.5	-2.5	2.6	8.6
2359	16/02/2006	-7.1	-5.9	-4.7	-4.3	-4.1	-2	3.2	9.2
559	17/02/2006	-7.9	-6.5	-5.2	-4.8	-4.6	-2.5	2.9	8.8
1159	17/02/2006	-7.2	-6	-4.9	-4.5	-4.3	-2.2	3.4	9.4
1759	17/02/2006	-7.6	-6.8	-5.9	-5.5	-5.3	-3	2.5	8.5
2359	17/02/2006	-7	-6.3	-5.6	-5.3	-5.1	-2.8	2.8	8.8
559	18/02/2006	-6.8	-6.2	-5.6	-5.3	-5.2	-2.9	2.9	8.8
1159	18/02/2006	-6.1	-5.6	-5.1	-4.9	-4.7	-2.5	3.4	9.3
1759	18/02/2006	-6.5	-6.2	-5.9	-5.7	-5.5	-3.4	2.6	8.5
2359	18/02/2006	-6	-5.8	-5.5	-5.3	-5.2	-3.1	2.8	8.8
559	19/02/2006	-5.8	-5.6	-5.4	-5.3	-5.2	-3.1	2.9	8.8
1159	19/02/2006	-5.6	-5.4	-5.3	-5.1	-5	-3.1	2.9	8.9
1759	19/02/2006	-5.5	-5.4	-5.4	-5.2	-5.1	-3.2	2.7	8.7
2359	19/02/2006	-5.5	-5.3	-5.3	-5.2	-5.1	-3.3	2.7	8.6
559	20/02/2006	-5.7	-5.4	-5.2	-5.1	-5	-3.2	2.7	8.7
1159	20/02/2006	-5.5	-5	-4.7	-4.6	-4.5	-2.8	3.2	9.1
1759	20/02/2006	-5.9	-5.6	-5.3	-5.1	-5	-3.2	2.6	8.6

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	20/02/2006	-5.5	-5.3	-5.1	-4.9	-4.9	-3.1	2.7	8.7
559	21/02/2006	-5.4	-5.2	-5.1	-5	-4.9	-3.1	2.6	8.6
1159	21/02/2006	-5.1	-4.8	-4.6	-4.5	-4.4	-2.8	3.1	9.1
1759	21/02/2006	-5.5	-5.4	-5.4	-5.3	-5.2	-3.5	2.2	8.2
2359	21/02/2006	-5.4	-5.2	-5.1	-5	-4.9	-3.3	2.4	8.4
559	22/02/2006	-5.5	-5.1	-4.9	-4.8	-4.7	-3.1	2.5	8.5
1159	22/02/2006	-4.9	-4.4	-4.1	-3.9	-3.9	-2.3	3.5	9.4
1759	22/02/2006	-5.9	-5.6	-5.3	-5.2	-5.1	-3.5	2.2	8.1
2359	22/02/2006	-5.7	-5.5	-5.2	-5.1	-5	-3.3	2.3	8.3
559	23/02/2006	-5.7	-5.4	-5.1	-4.9	-4.8	-3.2	2.4	8.4
1159	23/02/2006	-5.6	-5.2	-4.9	-4.7	-4.6	-3	2.6	8.7
1759	23/02/2006	-5.8	-5.5	-5.3	-5.2	-5.1	-3.4	2.2	8.2
2359	23/02/2006	-5.5	-5.2	-4.9	-4.8	-4.7	-3	2.5	8.6
559	24/02/2006	-5.6	-5.2	-4.9	-4.8	-4.7	-3	2.5	8.5
1159	24/02/2006	-5	-4.6	-4.3	-4.2	-4.1	-2.5	3.2	9.2
1759	24/02/2006	-5.7	-5.4	-5.1	-4.9	-4.8	-3.2	2.4	8.4
2359	24/02/2006	-5.8	-5.5	-5.3	-5.2	-5.1	-3.4	2.2	8.2
559	25/02/2006	-5.2	-4.8	-4.6	-4.4	-4.4	-2.7	2.9	8.9
1159	25/02/2006	-5.6	-5.1	-4.8	-4.6	-4.6	-2.9	2.8	8.8
1759	25/02/2006	-6.1	-5.8	-5.6	-5.4	-5.4	-3.7	2	8
2359	25/02/2006	-6	-5.7	-5.4	-5.2	-5.1	-3.4	2.2	8.2
559	26/02/2006	-6.1	-5.6	-5.3	-5.1	-5	-3.2	2.4	8.4
1159	26/02/2006	-5.6	-5	-4.6	-4.4	-4.3	-2.6	3.2	9.2
1759	26/02/2006	-6.7	-6	-5.5	-5.3	-5.2	-3.3	2.4	8.4
2359	26/02/2006	-6.8	-6.3	-5.8	-5.5	-5.4	-3.5	2.2	8.2
559	27/02/2006	-6.8	-6.2	-5.7	-5.4	-5.3	-3.3	2.4	8.4
1159	27/02/2006	-6.5	-5.9	-5.3	-5.1	-5	-3	2.9	8.9
1759	27/02/2006	-7	-6.4	-5.9	-5.6	-5.5	-3.5	2.4	8.4
2359	27/02/2006	-6.8	-6.3	-5.9	-5.6	-5.5	-3.5	2.4	8.4
559	28/02/2006	-6.9	-6.5	-6.2	-6	-5.9	-3.9	2.1	8.1
1159	28/02/2006	-6.6	-6.1	-5.9	-5.7	-5.6	-3.6	2.5	8.5
1759	28/02/2006	-7.1	-6.8	-6.6	-6.4	-6.4	-4.5	1.7	7.6
2359	28/02/2006	-6.7	-6.4	-6.2	-6	-5.9	-4	2.1	8.1
559	01/03/2006	-6.6	-6.2	-6	-5.8	-5.7	-3.8	2.2	8.2
1159	01/03/2006	-6.3	-5.9	-5.7	-5.5	-5.4	-3.5	2.6	8.6
1759	01/03/2006	-6.5	-6.2	-5.9	-5.7	-5.6	-3.8	2.3	8.3
2359	01/03/2006	-6.7	-6.4	-6.2	-6	-5.9	-4	2	8
559	02/03/2006	-6.5	-6.2	-6	-5.8	-5.7	-3.9	2.1	8.2
1159	02/03/2006	-6.2	-5.8	-5.5	-5.4	-5.3	-3.5	2.6	8.6
1759	02/03/2006	-6.9	-6.6	-6.3	-6.2	-6.1	-4.3	1.8	7.8
2359	02/03/2006	-6.8	-6.5	-6.2	-6	-5.9	-4.1	2	8
559	03/03/2006	-6.7	-6.3	-6.1	-5.9	-5.7	-3.9	2.1	8.1
1159	03/03/2006	-6.4	-5.9	-5.5	-5.3	-5.2	-3.5	2.8	8.8
1759	03/03/2006	-7	-6.5	-6.3	-6	-5.9	-4.2	1.9	8
2359	03/03/2006	-6.7	-6.3	-6.1	-5.9	-5.7	-3.9	2.1	8.2
559	04/03/2006	-6.5	-6.1	-5.9	-5.7	-5.6	-3.8	2.3	8.3
1159	04/03/2006	-6.1	-5.8	-5.6	-5.5	-5.4	-3.6	2.5	8.6
1759	04/03/2006	-6.4	-6.2	-6	-5.9	-5.7	-4	2.1	8.1
2359	04/03/2006	-6.4	-6.2	-6.1	-5.9	-5.8	-4.1	2	8
559	05/03/2006	-6.3	-6.1	-6	-5.9	-5.8	-4.1	1.9	8
1159	05/03/2006	-5.7	-5.4	-5.3	-5.2	-5.1	-3.5	2.6	8.7
1759	05/03/2006	-6.4	-6.2	-6	-5.9	-5.8	-4.3	1.8	7.8
2359	05/03/2006	-6.2	-6	-5.8	-5.6	-5.5	-3.9	2	8.1
559	06/03/2006	-6.1	-5.9	-5.7	-5.6	-5.4	-3.9	2.1	8.2
1159	06/03/2006	-5.5	-5.3	-5.2	-5	-5	-3.4	2.6	8.6
1759	06/03/2006	-6.3	-6.1	-6	-5.9	-5.8	-4.3	1.7	7.7
2359	06/03/2006	-6	-5.9	-5.8	-5.7	-5.6	-4.1	1.8	7.9
559	07/03/2006	-5.9	-5.7	-5.6	-5.5	-5.4	-3.9	1.9	8
1159	07/03/2006	-5.6	-5.3	-5.1	-5	-4.9	-3.6	2.5	8.5
1759	07/03/2006	-6.1	-5.9	-5.8	-5.6	-5.5	-4.1	1.7	7.7
2359	07/03/2006	-5.7	-5.5	-5.4	-5.2	-5.1	-3.7	2	8.1
559	08/03/2006	-5.6	-5.5	-5.4	-5.3	-5.2	-3.8	1.9	8
1159	08/03/2006	-5.4	-5.2	-5.2	-5.1	-5	-3.7	2.1	8.2
1759	08/03/2006	-5.5	-5.4	-5.4	-5.3	-5.2	-3.9	1.8	7.8
2359	08/03/2006	-5.2	-5.2	-5.2	-5.1	-5	-3.7	1.9	8
559	09/03/2006	-5	-5	-5.1	-5	-4.9	-3.6	1.9	8
1159	09/03/2006	-4.6	-4.7	-4.7	-4.7	-4.6	-3.4	2.1	8.1
1759	09/03/2006	-4.6	-4.7	-4.7	-4.7	-4.6	-3.4	1.9	8
2359	09/03/2006	-4.5	-4.6	-4.6	-4.5	-4.5	-3.4	1.9	8
559	10/03/2006	-4.4	-4.5	-4.5	-4.5	-4.4	-3.3	1.9	8
1159	10/03/2006	-4.2	-4.2	-4.2	-4.1	-4.1	-3.1	2.1	8.2
1759	10/03/2006	-4.4	-4.4	-4.4	-4.3	-4.3	-3.3	1.8	7.9
2359	10/03/2006	-4.2	-4.2	-4.2	-4.1	-4.1	-3.1	1.9	8
559	11/03/2006	-4.2	-4.2	-4.2	-4.1	-4.1	-3.1	1.8	7.9

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	11/03/2006	-4	-4	-3.9	-3.9	-3.8	-2.8	2.1
1759	11/03/2006	-4.4	-4.3	-4.2	-4.2	-4.1	-3.1	1.7
2359	11/03/2006	-4.4	-4.3	-4.3	-4.2	-4.1	-3.1	1.6
559	12/03/2006	-4.4	-4.3	-4.2	-4.1	-4.1	-3	1.7
1159	12/03/2006	-4.5	-4.2	-3.9	-3.9	-3.8	-2.9	2.1
1759	12/03/2006	-5.3	-5	-4.8	-4.7	-4.6	-3.6	1.1
2359	12/03/2006	-4.9	-4.7	-4.5	-4.3	-4.2	-3.1	1.5
559	13/03/2006	-4.8	-4.6	-4.4	-4.2	-4.1	-3	1.6
1159	13/03/2006	-4.4	-4	-3.7	-3.6	-3.5	-2.4	2.4
1759	13/03/2006	-5.1	-4.8	-4.5	-4.3	-4.2	-3.1	1.6
2359	13/03/2006	-5.1	-4.9	-4.7	-4.5	-4.4	-3.2	1.5
559	14/03/2006	-4.9	-4.7	-4.5	-4.3	-4.2	-3	1.7
1159	14/03/2006	-4.7	-4.4	-4.2	-4.1	-4	-2.8	2
1759	14/03/2006	-4.9	-4.6	-4.3	-4.2	-4.1	-2.9	1.9
2359	14/03/2006	-5	-4.7	-4.4	-4.3	-4.2	-2.9	1.8
559	15/03/2006	-5.1	-4.8	-4.6	-4.4	-4.3	-3.1	1.7
1159	15/03/2006	-4.7	-4.4	-4.1	-4	-3.9	-2.7	2.2
1759	15/03/2006	-5	-4.8	-4.5	-4.4	-4.3	-3.1	1.7
2359	15/03/2006	-4.9	-4.8	-4.6	-4.5	-4.4	-3.1	1.6
559	16/03/2006	-4.9	-4.8	-4.7	-4.6	-4.5	-3.3	1.5
1159	16/03/2006	-4.6	-4.3	-4.2	-4.1	-4	-2.8	2.1
1759	16/03/2006	-5	-4.8	-4.7	-4.6	-4.5	-3.3	1.5
2359	16/03/2006	-4.7	-4.6	-4.5	-4.4	-4.3	-3.1	1.7
559	17/03/2006	-4.6	-4.4	-4.3	-4.2	-4.1	-3	1.8
1159	17/03/2006	-4.4	-4.2	-4.1	-4	-4	-2.8	2
1759	17/03/2006	-4.8	-4.6	-4.4	-4.3	-4.2	-3.1	1.7
2359	17/03/2006	-4.6	-4.4	-4.3	-4.2	-4.1	-3	1.8
559	18/03/2006	-4.6	-4.4	-4.4	-4.2	-4.2	-3	1.7
1159	18/03/2006	-4.3	-4.1	-4	-4	-3.9	-2.8	2
1759	18/03/2006	-4.5	-4.4	-4.3	-4.2	-4.1	-3	1.7
2359	18/03/2006	-4.3	-4.2	-4.2	-4.1	-4	-2.9	1.8
559	19/03/2006	-4.3	-4.2	-4.1	-4.1	-4	-2.9	1.7
1159	19/03/2006	-3.9	-3.8	-3.8	-3.7	-3.7	-2.6	2.1
1759	19/03/2006	-4.1	-4.1	-4.1	-4	-3.9	-2.9	1.7
2359	19/03/2006	-3.9	-4	-4	-3.9	-3.9	-2.8	1.7
559	20/03/2006	-3.7	-3.8	-3.8	-3.8	-3.8	-2.8	1.7
1159	20/03/2006	-3.2	-3.3	-3.3	-3.3	-3.3	-2.4	2.1
1759	20/03/2006	-3.6	-3.6	-3.7	-3.7	-3.6	-2.7	1.7
2359	20/03/2006	-3.5	-3.5	-3.6	-3.6	-3.5	-2.7	1.7
559	21/03/2006	-3.4	-3.4	-3.5	-3.5	-3.4	-2.6	1.7
1159	21/03/2006	-3.2	-3.2	-3.3	-3.2	-3.2	-2.4	1.9
1759	21/03/2006	-3.3	-3.4	-3.4	-3.4	-3.4	-2.6	1.7
2359	21/03/2006	-2.3	-3.1	-3.4	-3.4	-3.4	-2.6	1.5
559	22/03/2006	-2.3	-2.8	-3	-3.1	-3.1	-2.4	1.7
1159	22/03/2006	-2.2	-2.5	-2.6	-2.7	-2.7	-2.1	2
1759	22/03/2006	-1.8	-2.6	-2.9	-2.9	-2.9	-2.4	1.6
2359	22/03/2006	-1.5	-2.3	-2.8	-2.9	-2.9	-2.4	1.5
559	23/03/2006	-1.4	-2.1	-2.6	-2.7	-2.8	-2.3	1.5
1159	23/03/2006	-1.3	-1.8	-2.2	-2.3	-2.4	-2.1	1.8
1759	23/03/2006	-1.1	-1.8	-2.3	-2.4	-2.5	-2.2	1.6
2359	23/03/2006	-1	-1.7	-2.2	-2.3	-2.3	-2	1.5
559	24/03/2006	-1	-1.6	-2	-2.2	-2.2	-1.9	1.5
1159	24/03/2006	-0.8	-1.3	-1.7	-1.8	-1.9	-1.7	1.8
1759	24/03/2006	-0.8	-1.4	-1.8	-2	-2	-1.8	1.5
2359	24/03/2006	-0.7	-1.3	-1.7	-1.8	-1.8	-1.6	1.6
559	25/03/2006	-0.7	-1.1	-1.5	-1.6	-1.6	-1.4	1.7
1159	25/03/2006	-0.8	-1.1	-1.4	-1.5	-1.6	-1.4	1.7
1759	25/03/2006	-0.8	-1.2	-1.5	-1.6	-1.6	-1.4	1.6
2359	25/03/2006	-0.6	-1	-1.3	-1.4	-1.5	-1.2	1.6
559	26/03/2006	-0.5	-0.9	-1.2	-1.3	-1.4	-1.1	1.7
1159	26/03/2006	-0.4	-0.8	-1.1	-1.2	-1.2	-1	1.8
1803	26/03/2006	-0.4	-0.8	-1.2	-1.2	-1.2	-0.9	1.8
2359	26/03/2006	-0.4	-0.8	-1.1	-1.2	-1.2	-1	1.6
559	27/03/2006	-0.4	-0.8	-1	-1.1	-1.2	-0.9	1.7
1159	27/03/2006	0.2	-0.2	-0.4	-0.5	-0.6	-0.4	2.2
1759	27/03/2006	-0.5	-0.8	-1.1	-1.2	-1.2	-1	1.5
2359	27/03/2006	-0.4	-0.8	-1	-1.1	-1.1	-0.9	1.6
559	28/03/2006	-0.5	-0.7	-0.9	-1	-1	-0.8	1.6
1159	28/03/2006	-0.8	-0.7	-0.7	-0.8	-0.8	-0.6	1.9
1759	28/03/2006	-0.9	-1.1	-1.2	-1.3	-1.3	-1.2	1.3
2359	28/03/2006	-1	-0.9	-1	-1	-1	-0.8	1.5
559	29/03/2006	-2.3	-1.4	-1.1	-1.1	-1.1	-0.9	1.4
1159	29/03/2006	-2.2	-1.6	-0.9	-0.9	-0.9	-0.8	1.8
1759	29/03/2006	-1	-1.3	-1.1	-1.1	-1.1	-0.9	1.5

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	29/03/2006	-0.7	-0.9	-1	-0.9	-0.9	-0.7	1.6	7.2
559	30/03/2006	-1.1	-0.9	-0.7	-0.8	-0.7	-0.5	1.8	7.4
1159	30/03/2006	-1	-1.1	-0.9	-0.9	-0.9	-0.7	1.7	7.3
1759	30/03/2006	-0.8	-1.1	-1.2	-1.2	-1.1	-0.9	1.4	7
2359	30/03/2006	-0.7	-0.9	-1	-1	-1	-0.8	1.4	7
559	31/03/2006	-0.5	-0.8	-0.9	-1	-0.9	-0.7	1.5	7.1
1159	31/03/2006	-0.1	-0.3	-0.4	-0.5	-0.6	-0.4	2	7.5
1759	31/03/2006	-0.8	-1.1	-1.3	-1.3	-1.3	-1.1	1.1	6.7
2359	31/03/2006	-0.4	-0.7	-0.8	-0.8	-0.8	-0.6	1.5	7.1
559	01/04/2006	-0.3	-0.6	-0.8	-0.8	-0.8	-0.6	1.6	7.1
1159	01/04/2006	-0.1	-0.4	-0.6	-0.7	-0.7	-0.5	1.8	7.3
1759	01/04/2006	0	-0.3	-0.5	-0.6	-0.6	-0.5	1.8	7.3
2359	01/04/2006	-0.2	-0.5	-0.7	-0.7	-0.7	-0.6	1.6	7.1
559	02/04/2006	-0.3	-0.6	-0.7	-0.8	-0.7	-0.6	1.5	7
1159	02/04/2006	0.1	-0.1	-0.3	-0.4	-0.5	-0.3	2.1	7.5
1759	02/04/2006	-0.2	-0.5	-0.8	-0.8	-0.8	-0.7	1.5	7
2359	02/04/2006	-0.3	-0.5	-0.7	-0.8	-0.7	-0.6	1.5	6.9
559	03/04/2006	-0.1	-0.3	-0.5	-0.5	-0.5	-0.4	1.7	7.2
1159	03/04/2006	0.2	0	-0.2	-0.3	-0.4	-0.2	2.1	7.5
1759	03/04/2006	-0.5	-0.7	-0.9	-1	-1	-0.9	1.3	6.7
2359	03/04/2006	-0.2	-0.4	-0.6	-0.6	-0.6	-0.5	1.6	7
559	04/04/2006	-0.1	-0.4	-0.6	-0.6	-0.6	-0.5	1.6	7
1159	04/04/2006	0.3	0	-0.2	-0.3	-0.3	-0.2	2.1	7.4
1759	04/04/2006	-0.2	-0.6	-0.8	-0.9	-0.9	-0.8	1.4	6.7
2359	04/04/2006	-0.1	-0.4	-0.6	-0.7	-0.6	-0.5	1.5	6.9
559	05/04/2006	0	-0.3	-0.5	-0.6	-0.5	-0.4	1.6	7
1159	05/04/2006	0.3	0	-0.2	-0.3	-0.3	-0.2	2	7.3
1759	05/04/2006	1.6	-0.6	-0.9	-0.9	-0.9	-0.8	1.3	6.6
2359	05/04/2006	1	-0.3	-0.5	-0.6	-0.5	-0.4	1.6	6.9
559	06/04/2006	0.2	-0.1	-0.3	-0.4	-0.4	-0.2	1.8	7.1
1159	06/04/2006	0.8	0.2	-0.1	-0.2	-0.2	-0.1	2.1	7.4
1759	06/04/2006	2.4	-0.3	-0.6	-0.7	-0.7	-0.6	1.5	6.7
2359	06/04/2006	1.3	-0.2	-0.5	-0.5	-0.5	-0.4	1.6	6.8
559	07/04/2006	1	0	-0.4	-0.4	-0.4	-0.3	1.7	7
1159	07/04/2006	1.5	0.2	-0.2	-0.3	-0.3	-0.2	1.9	7.1
1759	07/04/2006	4	0.2	-0.2	-0.3	-0.3	-0.2	1.9	7.1
2359	07/04/2006	2.5	0.1	-0.3	-0.4	-0.4	-0.3	1.7	6.9
559	08/04/2006	1	0.1	-0.3	-0.3	-0.3	-0.2	1.8	7
1159	08/04/2006	1.3	0.5	0.1	0	0	0	2.2	7.3
1759	08/04/2006	4.4	0.5	-0.4	-0.5	-0.5	-0.4	1.6	6.8
2359	08/04/2006	3.3	0.8	-0.3	-0.4	-0.4	-0.3	1.7	6.8
559	09/04/2006	1.7	0.6	-0.1	-0.2	-0.2	-0.1	1.9	7
1159	09/04/2006	2.5	1.1	0.5	0.3	0.2	0.3	2.5	7.6
1759	09/04/2006	5.3	1.6	-0.2	-0.3	-0.4	-0.3	1.7	6.9
2359	09/04/2006	4.1	1.6	-0.2	-0.3	-0.3	-0.3	1.7	6.8
559	10/04/2006	2.2	1	-0.1	-0.2	-0.3	-0.2	1.8	6.9
1159	10/04/2006	2.2	0.6	-0.1	-0.3	-0.3	-0.3	1.9	7
1759	10/04/2006	6.2	2.1	-0.2	-0.3	-0.4	-0.4	1.7	6.8
2359	10/04/2006	4.2	2.1	-0.2	-0.4	-0.4	-0.3	1.6	6.7
559	11/04/2006	1.5	0.9	-0.2	-0.4	-0.4	-0.4	1.6	6.7
1159	11/04/2006	2	0.7	0.2	0	-0.1	-0.1	2.1	7.1
1759	11/04/2006	6.8	2.4	-0.5	-0.7	-0.7	-0.7	1.4	6.4
2359	11/04/2006	4.9	3	0.1	-0.2	-0.2	-0.2	1.8	6.8
559	12/04/2006	2.1	1.6	0.2	-0.1	-0.2	-0.2	1.8	6.9
1159	12/04/2006	2.3	1.1	0.4	0.1	0	-0.1	2.3	7.2
1759	12/04/2006	6.1	2.6	0.1	-0.3	-0.4	-0.4	1.7	6.7
2359	12/04/2006	5.2	2.8	0.3	-0.4	-0.4	-0.4	1.5	6.5
559	13/04/2006	3.7	2.4	0.5	-0.1	-0.2	-0.2	1.8	6.7
1159	13/04/2006	3.4	2	0.7	0.1	0	0	2.2	7.1
1759	13/04/2006	6.4	3	1	0.1	0	-0.1	2	7
2359	13/04/2006	4.6	3.1	1	0	-0.2	-0.2	1.8	6.7
559	14/04/2006	2.8	2.3	1	0.4	0.1	0.1	2.1	7
1159	14/04/2006	3	1.7	0.7	0.3	0	0	2.1	7
1759	14/04/2006	5.9	2.5	0.5	-0.1	-0.5	-0.5	1.5	6.4
2359	14/04/2006	5.5	3.6	1.4	0.5	-0.1	-0.2	1.8	6.8
559	15/04/2006	4	2.9	1.4	0.7	-0.1	-0.2	1.8	6.7
1159	15/04/2006	3.9	2.9	1.9	1.3	0.9	0.3	2.4	7.3
1759	15/04/2006	7.3	3.7	1.7	1.1	0.7	-0.2	1.8	6.7
2359	15/04/2006	5.4	3.9	2.3	1.6	1.1	-0.3	1.7	6.6
559	16/04/2006	2.6	2.7	2.3	1.9	1.5	-0.1	1.9	6.7
1159	16/04/2006	2.1	2.2	2.3	2	1.8	0.2	2.3	7.1
1759	16/04/2006	3.2	1.8	1.3	1.1	0.9	-0.5	1.5	6.3
2359	16/04/2006	3	2.4	1.7	1.4	1.2	-0.1	1.8	6.6
559	17/04/2006	2	2	1.8	1.6	1.4	0	1.9	6.8

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
1159	17/04/2006	3.3	2.4	2.3	2.2	2	0.6	2.8	7.6
1759	17/04/2006	7.7	3.7	2	1.5	1.2	-0.2	1.8	6.6
2359	17/04/2006	6.3	4.5	2.8	2.1	1.6	-0.1	1.7	6.5
559	18/04/2006	3.8	3.7	3	2.6	2.2	0.2	1.9	6.7
1159	18/04/2006	4.2	3.1	2.8	2.6	2.3	0.4	2.2	7
1759	18/04/2006	9	4.8	2.8	2.2	1.8	-0.1	1.5	6.3
2359	18/04/2006	7.9	5.8	3.8	3	2.5	0.2	1.7	6.4
559	19/04/2006	5.4	5	4.1	3.6	3.2	0.7	2	6.7
1159	19/04/2006	5.5	4.4	3.9	3.6	3.3	0.8	2.2	6.9
1759	19/04/2006	9.6	5.8	3.8	3.2	2.8	0.5	1.6	6.3
4	20/04/2006	8.9	6.8	4.9	4.2	3.6	1.1	2.1	6.9
559	20/04/2006	6.7	6	4.9	4.4	3.9	1.2	1.9	6.6
1159	20/04/2006	7.2	5.8	5.1	4.7	4.3	1.6	2.4	7.1
1759	20/04/2006	11.9	7.5	5.1	4.3	3.9	1.4	1.7	6.4
2359	20/04/2006	10.5	8.2	6	5.1	4.4	1.5	1.7	6.4
559	21/04/2006	8.4	7.5	6.4	5.8	5.3	2.3	2	6.7
1159	21/04/2006	8.5	7.3	6.6	6.2	5.8	2.9	2.5	7.1
1759	21/04/2006	11	7.8	6	5.5	5.1	2.6	1.7	6.3
2359	21/04/2006	9.8	8.3	6.8	6.1	5.7	3.1	1.9	6.5
559	22/04/2006	7.7	7.6	7	6.6	6.3	3.7	2.3	6.8
1159	22/04/2006	6.1	6.6	6.8	6.6	6.4	4	2.5	7
1759	22/04/2006	7	6.2	6.2	6.1	6	3.9	2.3	6.8
2359	22/04/2006	5.8	6.1	5.9	5.7	5.7	3.8	2.2	6.6
559	23/04/2006	3.7	5	5.5	5.6	5.6	3.9	2.3	6.7
1159	23/04/2006	4.4	4.6	5.4	5.4	5.5	4	2.9	7.1
1759	23/04/2006	9.9	6.1	4.9	4.5	4.5	3.3	2	6.2
2359	23/04/2006	9	7.5	6	5.4	5.2	3.5	2.3	6.5
559	24/04/2006	6.4	6.4	6	5.7	5.5	3.6	2.3	6.5
1159	24/04/2006	7	6.1	6.1	5.9	5.8	4.1	2.9	7
1759	24/04/2006	12.3	7.9	6	5.4	5.2	3.6	2.2	6.2
2359	24/04/2006	11.1	8.9	6.9	6.1	5.7	3.6	2.1	6
559	25/04/2006	8.4	8.1	7.4	6.9	6.6	4.3	2.5	6.4
1159	25/04/2006	9.1	7.9	7.6	7.3	7.1	4.9	3.2	7
1759	25/04/2006	14.2	9.7	7.4	6.8	6.5	4.5	2.4	6.2
2359	25/04/2006	12.8	10.5	8.4	7.5	7.1	4.7	2.4	6.1
559	26/04/2006	10.2	9.7	8.8	8.2	7.9	5.3	2.8	6.5
1159	26/04/2006	10.5	9.2	8.8	8.5	8.2	5.8	3.3	6.9
1759	26/04/2006	15.4	10.9	8.7	8	7.7	5.4	2.5	6
2359	26/04/2006	13.8	11.8	9.8	9	8.5	5.9	2.8	6.3
559	27/04/2006	11.1	10.9	10.2	9.7	9.4	6.6	3.3	6.8
1159	27/04/2006	11.3	10.3	10	9.7	9.5	6.9	3.6	6.9
1759	27/04/2006	15.6	12.2	10.2	9.6	9.4	7	3.4	6.7
2359	27/04/2006	13.1	11.8	10.2	9.6	9.2	6.7	2.9	6.2
559	28/04/2006	10.2	10.8	10.5	10.2	9.9	7.3	3.4	6.7
1159	28/04/2006	10.5	9.9	10.1	9.9	9.8	7.5	3.8	6.8
1759	28/04/2006	15.1	11.6	10	9.5	9.3	7.2	3.3	6.3
2359	28/04/2006	14	12.1	10.5	9.8	9.4	7	3.1	6
559	29/04/2006	12.5	12	11.2	10.7	10.4	7.9	3.8	6.7
1159	29/04/2006	12.3	11.4	10.9	10.6	10.4	8	3.9	6.7
1759	29/04/2006	14.3	12.1	10.9	10.4	10.2	8	3.7	6.4
2359	29/04/2006	13.2	12.3	11.4	10.8	10.5	8.2	3.9	6.6
559	30/04/2006	11.5	11.5	11.3	11	10.8	8.5	4.1	6.7
1159	30/04/2006	11.2	11.3	11.5	11.3	11.1	9	4.8	7.3
1759	30/04/2006	14.5	12	10.6	10.3	10.2	8.3	4	6.4
2359	30/04/2006	12.5	12.1	11	10.6	10.4	8.4	4.1	6.5
559	01/05/2006	10.2	11	11	10.8	10.7	8.8	4.4	6.7
1159	01/05/2006	10	10.7	11.1	11.1	11	9.3	5.2	7.3
1759	01/05/2006	10.6	10.3	10.1	10.1	10.1	8.7	4.5	6.6
2359	01/05/2006	8.7	10	10.2	10.2	10.2	8.8	4.8	6.8
559	02/05/2006	6.8	8.6	9.6	9.8	9.9	8.7	4.9	6.8
1159	02/05/2006	6.4	7.8	9	9.3	9.5	8.6	5.1	6.9
1759	02/05/2006	7	7.6	8.3	8.6	8.8	8.2	5	6.7
2359	02/05/2006	6.4	7.4	7.9	8.1	8.3	7.9	4.9	6.6
559	03/05/2006	5	6.7	7.7	8	8.2	7.8	5.1	6.8
1159	03/05/2006	6.3	6.4	7.3	7.6	7.8	7.6	5.5	7
1759	03/05/2006	11.8	8.6	7.2	7.1	7.2	7	5	6.5
2359	03/05/2006	9.4	9.1	7.8	7.5	7.4	7	5.1	6.5
559	04/05/2006	7.1	8.1	8	8	8	7.3	5.5	6.9
1159	04/05/2006	7.8	8	8.2	8.3	8.3	7.7	6.2	7.5
1759	04/05/2006	11.9	8.8	7.4	7.2	7.2	6.7	4.9	6.3
2359	04/05/2006	10.5	9.6	8.3	7.9	7.7	6.9	5.1	6.4
559	05/05/2006	8.4	9	8.7	8.6	8.4	7.4	5.6	6.9
1159	05/05/2006	9.2	8.9	9	8.9	8.9	7.9	6.3	7.5
1759	05/05/2006	13.4	10	8.3	8	7.8	7	5.1	6.3

MLSB Coke Deep Cover Soil Temperature (deg C)

		Sensor Depth (cm)							
time	date	5	10	20	25	30	40	90	180
2359	05/05/2006	12.4	10.8	9.2	8.6	8.3	7.1	5	6.2
559	06/05/2006	10.2	10.3	9.7	9.3	9.1	7.6	5.3	6.6
1159	06/05/2006	11.3	10.4	10.2	9.9	9.7	8.3	6.1	7.3
1759	06/05/2006	15.1	11.8	10	9.5	9.2	7.9	5.3	6.5
2359	06/05/2006	13.6	12.2	10.9	10.2	9.8	8.1	5.3	6.5
559	07/05/2006	11.3	11.5	11.1	10.7	10.4	8.6	5.5	6.7
1159	07/05/2006	11.8	10.8	10.7	10.5	10.4	8.7	5.7	6.8
1759	07/05/2006	17	13.1	11.2	10.6	10.2	8.7	5.4	6.5
2359	07/05/2006	14.9	13.6	12	11.3	10.9	8.9	5.4	6.4
559	08/05/2006	12.7	12.9	12.6	12.2	11.9	9.8	6.1	7.1
1159	08/05/2006	12.5	11.3	11.1	10.9	10.7	8.9	5.1	6
1759	08/05/2006	14.3	13.1	12.1	11.7	11.5	9.8	5.8	6.8
2359	08/05/2006	12.5	12.7	12.3	12	11.8	10.1	6.1	6.9
559	09/05/2006	11.1	11.8	11.9	11.9	11.7	10.2	6.1	6.9
1159	09/05/2006	10.9	11.3	11.6	11.6	11.6	10.3	6.3	7.1
1759	09/05/2006	12	11.4	11.2	11.2	11.2	10.1	6.2	6.9
2359	09/05/2006	11.5	11.5	11.2	11.1	11	10	6.3	6.9
559	10/05/2006	10.5	11.1	11.1	11.1	11.1	10.1	6.5	7
1159	10/05/2006	11.1	10.6	10.7	10.7	10.7	9.9	6.5	7
1759	10/05/2006	14.5	12	10.7	10.4	10.3	9.4	6.1	6.5
2359	10/05/2006	13.5	12.8	11.7	11.3	11	9.8	6.5	6.9
559	11/05/2006	11.9	12.4	12.1	11.9	11.8	10.5	7.1	7.5
1159	11/05/2006	12.4	11.2	11	10.9	10.8	9.7	6.4	6.7
1759	11/05/2006	16	13.2	11.6	11.2	10.9	9.8	6.4	6.6
2359	11/05/2006	14	13.4	12.2	11.8	11.5	10	6.5	6.7
559	12/05/2006	11.7	12.4	12.3	12.1	11.9	10.4	6.8	7
1159	12/05/2006	12.5	11.9	12	11.9	11.9	10.6	7	7.1
1759	12/05/2006	16.1	13.4	12.1	11.7	11.5	10.3	6.6	6.7
2359	12/05/2006	14.8	14.1	13.1	12.6	12.3	10.8	7.1	7.1
559	13/05/2006	12.9	13.3	13.1	12.8	12.6	11	7.2	7.2
1159	13/05/2006	13.5	13.1	13.1	13	12.9	11.4	7.6	7.6
1759	13/05/2006	15.9	13.9	12.6	12.3	12.1	10.9	6.9	6.8
2359	13/05/2006	14.7	14.2	13.4	13	12.7	11.2	7.2	7.1
559	14/05/2006	12.9	13.4	13.3	13	12.9	11.4	7.2	7.1
1159	14/05/2006	13.7	13.5	13.6	13.5	13.3	11.9	8.1	7.8
1759	14/05/2006	16.7	15	13.9	13.5	13.3	12	8.1	7.8
2359	14/05/2006	14.3	14.2	13.5	13.1	12.9	11.5	7.4	7.1
559	15/05/2006	12.3	13.4	13.6	13.5	13.3	11.9	7.8	7.4
1159	15/05/2006	13.8	13.2	13.4	13.3	13.3	12.1	8.3	7.8
1759	15/05/2006	18.6	15	13.2	12.8	12.5	11.5	7.4	6.9
2359	15/05/2006	16.7	15.8	14.3	13.7	13.3	11.8	7.7	7.2
559	16/05/2006	14.5	15.2	14.9	14.6	14.3	12.7	8.5	7.9
1159	16/05/2006	15.2	14.2	14.2	14	13.9	12.4	8.3	7.7
1759	16/05/2006	20.5	16.9	14.8	14.2	13.9	12.5	8.2	7.6
2359	16/05/2006	18.2	16.9	15.1	14.5	14.1	12.2	7.8	7.1
559	17/05/2006	15.8	16	15.3	15	14.6	12.7	8.1	7.4
1159	17/05/2006	16.2	15.8	15.5	15.3	15	13.3	8.7	7.9
1759	17/05/2006	19.6	16.8	15.3	14.9	14.6	13.1	8.3	7.4
2359	17/05/2006	18.6	17.3	15.8	15.2	14.8	12.9	8	7.2
559	18/05/2006	16.8	17.1	16.6	16.3	15.9	14	9	8.1
1159	18/05/2006	17.5	16.4	16.2	15.9	15.7	14	9	8
1759	18/05/2006	21.9	18.2	16	15.5	15.2	13.5	8.3	7.3
2359	18/05/2006	19.5	18.4	16.7	16.1	15.6	13.6	8.4	7.3
559	19/05/2006	16.4	17.1	16.7	16.4	16.1	14.1	8.7	7.5
1159	19/05/2006	16.5	16.5	16.4	16.3	16.2	14.5	9	7.8
1759	19/05/2006	19.1	17.2	16.2	16	15.9	14.4	8.9	7.7
2359	19/05/2006	17.2	17.3	16.3	16.1	15.9	14.4	9	7.7
559	20/05/2006	14.6	16.2	16.3	16.3	16.2	14.8	9.5	8.1
1159	20/05/2006	13.8	14.8	15.4	15.6	15.6	14.5	9.3	7.9
1759	20/05/2006	14.9	15	15.1	15.1	15.1	14.3	9.3	7.8
2359	20/05/2006	13.7	14.8	15.1	15.1	15.1	14.3	9.5	8
559	21/05/2006	12	13.8	14.6	14.8	14.9	14.2	9.6	8
1159	21/05/2006	11	12.9	14.1	14.4	14.6	14.1	9.9	8.2
1759	21/05/2006	13	13.3	13.9	14.1	14.3	14.1	10.2	8.5
2359	21/05/2006	13	13.2	13.3	13.4	13.4	13.3	9.6	7.9
559	22/05/2006	12.2	12.9	13.2	13.3	13.4	13.1	9.8	7.9
1159	22/05/2006	14.4	13.5	13.6	13.6	13.6	13.4	10.4	8.5
1759	22/05/2006	19.7	15.8	13.7	13.2	13	12.6	9.6	7.7
2359	22/05/2006	17.4	16.3	14.7	14.1	13.7	12.7	9.6	7.7
559	23/05/2006	14.4	15.2	15	14.7	14.6	13.3	10	8.1
1159	23/05/2006	14.7	14.7	14.8	14.8	14.7	13.7	10.4	8.4
1759	23/05/2006	17.4	15.7	14.5	14.3	14.3	13.4	9.9	8
2359	23/05/2006	15.8	15.7	14.9	14.6	14.4	13.4	10	8
559	24/05/2006	14.1	14.9	15	14.9	14.8	13.7	10.2	8.2

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	24/05/2006	13.6	14.3	14.6	14.7	14.7	13.8	10.2
1759	24/05/2006	13.8	14.2	14.3	14.4	14.4	13.8	10.3
2359	24/05/2006	13	13.9	14.1	14.2	14.2	13.7	10.3
559	25/05/2006	12.1	13.3	13.8	14	14	13.7	10.4
1159	25/05/2006	11.9	12.8	13.3	13.5	13.6	13.5	10.4
1759	25/05/2006	13.1	12.8	13	13.1	13.2	13.2	10.4
2359	25/05/2006	12.9	13.1	13	13.1	13.1	13	10.4
559	26/05/2006	11.7	12.7	13.1	13.2	13.2	13.1	10.6
1159	26/05/2006	12.1	12.6	13	13.1	13.2	13.1	10.9
1759	26/05/2006	14.3	13.2	12.7	12.6	12.7	12.7	10.4
2359	26/05/2006	13.1	13.3	13	12.9	12.9	12.6	10.5
559	27/05/2006	11.5	13.1	13.6	13.7	13.8	13.5	11.5
1159	27/05/2006	12.6	12.1	12.6	12.7	12.8	12.8	11
1759	27/05/2006	18	14.4	12.7	12.4	12.3	12.2	10.3
2359	27/05/2006	15.7	15	13.7	13.2	12.9	12.3	10.4
559	28/05/2006	13.3	14.3	14.3	14.1	14	13.1	11.1
1159	28/05/2006	13.4	13.4	13.7	13.7	13.7	13.1	11.1
1759	28/05/2006	17.6	15.2	14	13.7	13.6	13.1	11
2359	28/05/2006	16.2	15.5	14.3	13.9	13.6	12.8	10.5
559	29/05/2006	14.1	14.7	14.5	14.4	14.2	13.2	10.8
1159	29/05/2006	15.2	14.2	14	14	13.9	13.1	10.7
1759	29/05/2006	19.6	16.6	14.6	14.1	13.9	13.1	10.5
2359	29/05/2006	17.6	16.9	15.3	14.8	14.5	13.3	10.6
559	30/05/2006	15.2	16	15.7	15.5	15.3	14	11.1
1159	30/05/2006	15.5	15	15	15	14.9	13.9	10.9
1759	30/05/2006	18.3	16.3	15.2	14.9	14.8	13.9	10.8
2359	30/05/2006	16.8	16.6	15.6	15.3	15	14	10.8
559	31/05/2006	15.3	16.3	16.3	16.2	16	15	11.8
1159	31/05/2006	16	15.2	15.3	15.3	15.2	14.3	11.3
1759	31/05/2006	20.4	17.3	15.6	15.1	14.9	14.1	10.9
2359	31/05/2006	19	17.9	16.4	15.8	15.4	14.2	10.9
559	01/06/2006	17.4	17.7	17.2	16.9	16.6	15.2	11.8
1159	01/06/2006	18.3	17.1	16.8	16.6	16.4	15.1	11.8
1759	01/06/2006	23.1	19.4	17.2	16.5	16.2	14.9	11.2
2359	01/06/2006	21	19.6	17.7	17	16.5	14.8	10.9
559	02/06/2006	19.1	19.3	18.7	18.3	17.9	16	12
1159	02/06/2006	19.5	18.2	17.8	17.5	17.3	15.7	11.5
1759	02/06/2006	23.5	20.3	18.3	17.6	17.2	15.7	11.2
2359	02/06/2006	22	20.6	19	18.3	17.9	15.9	11.3
559	03/06/2006	19.6	19.7	19	18.7	18.3	16.3	11.4
1159	03/06/2006	19.4	18.7	18.3	18	17.8	16.1	11
1759	03/06/2006	19.4	19.1	18.8	18.5	18.2	16.6	11.5
2359	03/06/2006	18.1	18.8	18.8	18.6	18.4	16.9	11.8
559	04/06/2006	16.5	18.1	18.7	18.7	18.6	17.3	12.3
1159	04/06/2006	17.2	17.2	17.8	17.9	17.9	16.9	12.1
1759	04/06/2006	21.5	19.1	18	17.7	17.5	16.6	11.9
2359	04/06/2006	19.8	19.4	18.5	18.1	17.8	16.5	11.8
559	05/06/2006	17.6	18.8	18.9	18.8	18.6	17.3	12.7
1159	05/06/2006	18.3	17.7	17.9	17.9	17.8	16.7	12.3
1759	05/06/2006	21.8	19.1	17.7	17.3	17.1	16.1	11.5
2359	05/06/2006	20.1	19.7	18.7	18.3	18	16.7	12.1
559	06/06/2006	18	19.4	19.6	19.5	19.3	17.9	13.4
1159	06/06/2006	16.8	17.4	18.1	18.1	18.1	17.1	12.6
1759	06/06/2006	19.3	18.1	17.7	17.6	17.6	16.8	12.4
2359	06/06/2006	18	18.3	18	17.8	17.7	16.9	12.6
559	07/06/2006	15.8	17.4	17.9	17.9	17.9	17.2	12.9
1159	07/06/2006	16.7	17.2	17.7	17.8	17.9	17.3	13.4
1759	07/06/2006	20.3	18.7	17.9	17.7	17.6	17.1	13.3
2359	07/06/2006	18.6	18.3	17.5	17.3	17.1	16.3	12.5
559	08/06/2006	17	18	18.1	18	17.9	17.1	13.4
1159	08/06/2006	17.3	17	17.2	17.2	17.2	16.5	12.9
1759	08/06/2006	21.2	18.7	17.5	17.2	17.1	16.5	12.8
2359	08/06/2006	19.8	19.1	18.1	17.7	17.5	16.5	12.9
559	09/06/2006	17.8	18.3	18.1	18	17.8	16.8	13
1159	09/06/2006	17.4	17.7	17.7	17.7	17.7	16.8	13
1759	09/06/2006	18.9	18.5	18.1	18	17.9	17.2	13.5
2359	09/06/2006	16.7	17.6	17.7	17.7	17.6	16.8	13.2
559	10/06/2006	14.9	16.6	17.3	17.5	17.5	16.9	13.3
1159	10/06/2006	15.1	16	16.7	16.9	17	16.7	13.3
1759	10/06/2006	17.6	16.6	16.5	16.5	16.6	16.4	13.1
2359	10/06/2006	16.5	16.9	16.8	16.8	16.7	16.4	13.3
559	11/06/2006	14.8	16.1	16.6	16.7	16.7	16.4	13.5
1159	11/06/2006	15.3	16.2	16.7	16.9	17	16.8	14.1
1759	11/06/2006	17.8	17	16.5	16.6	16.6	16.5	14



MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	11/06/2006	17	17.1	16.6	16.5	16.4	16.2	13.7
559	12/06/2006	15.4	16.2	16.3	16.3	16.3	16.1	13.6
1159	12/06/2006	17	16.5	16.5	16.5	16.5	16.3	14
1759	12/06/2006	21.8	18.2	16.5	16.1	16	15.7	13.3
2359	12/06/2006	19.8	18.9	17.4	16.9	16.6	15.8	13.4
559	13/06/2006	17.9	18.6	18.3	18.1	17.8	16.8	14.4
1159	13/06/2006	18.8	18	17.9	17.8	17.7	16.8	14.3
1759	13/06/2006	22.3	19.4	17.8	17.3	17.1	16.2	13.4
2359	13/06/2006	21	19.9	18.5	18	17.6	16.4	13.4
559	14/06/2006	19.5	19.5	19	18.7	18.4	17.1	14
1159	14/06/2006	20.2	19.5	19.1	18.9	18.7	17.6	14.4
1759	14/06/2006	25.7	21.6	19.2	18.7	18.4	17.2	13.7
2359	14/06/2006	23.3	21.7	19.7	19	18.6	17	13.3
559	15/06/2006	21.1	21.4	20.6	20.3	19.9	18.1	14.3
1159	15/06/2006	22.1	20.8	20.2	20	19.8	18.2	14.3
1759	15/06/2006	26.3	22.9	20.8	20.2	19.8	18.3	14.1
2359	15/06/2006	23.8	22.6	21	20.3	19.9	18	13.5
559	16/06/2006	21.6	21.8	21.3	21	20.6	18.7	14.1
1159	16/06/2006	22.7	21.7	21.2	21	20.7	19	14.4
1759	16/06/2006	26.5	23.6	21.8	21.2	20.9	19.2	14.4
2359	16/06/2006	24	23	21.6	21.1	20.7	18.8	13.7
559	17/06/2006	22.1	22.5	22.2	21.9	21.6	19.7	14.6
1159	17/06/2006	22.9	21.8	21.4	21.2	21	19.4	14.2
1759	17/06/2006	26.2	23.2	21.5	21.1	20.8	19.3	13.9
2359	17/06/2006	23	23.1	22.2	21.8	21.4	19.6	14.3
559	18/06/2006	21.2	22.1	22.2	22.1	21.9	20.2	14.8
1159	18/06/2006	22.7	22	21.9	21.8	21.7	20.3	15.1
1759	18/06/2006	25.9	23.1	21.4	21	20.7	19.4	14.1
2359	18/06/2006	23.2	23	22.1	21.7	21.4	19.8	14.4
559	19/06/2006	21	21.9	22	21.9	21.7	20.1	14.7
1159	19/06/2006	20	21.1	21.6	21.7	21.6	20.3	14.9
1759	19/06/2006	22.8	22.2	21.9	21.8	21.7	20.7	15.5
2359	19/06/2006	21.3	21.5	21.1	21	20.9	19.8	14.7
559	20/06/2006	19.4	21.3	21.9	21.9	21.9	20.9	16
1159	20/06/2006	20.4	20.3	20.8	21	21	20.3	15.6
1759	20/06/2006	23.1	20.5	19.3	19	18.9	18.4	13.8
2359	20/06/2006	21.3	21.4	20.9	20.7	20.5	19.6	15.1
559	21/06/2006	18.9	20.2	20.8	20.8	20.7	19.8	15.4
1159	21/06/2006	18.6	19.5	20.2	20.4	20.4	19.8	15.5
1759	21/06/2006	19.6	19.4	19.7	19.8	19.8	19.4	15.3
2359	21/06/2006	19	19.5	19.8	19.8	19.8	19.4	15.4
559	22/06/2006	17.6	19	19.6	19.8	19.8	19.5	15.7
1159	22/06/2006	19.2	18.9	19.4	19.5	19.6	19.4	16
1759	22/06/2006	24.2	21.3	19.8	19.5	19.4	19.1	15.8
2359	22/06/2006	21.4	21.1	20.2	19.8	19.6	18.8	15.5
559	23/06/2006	19.3	20.6	20.9	20.8	20.7	19.8	16.5
1159	23/06/2006	20.2	19.7	20.1	20.1	20.1	19.4	16.2
1759	23/06/2006	24.2	22	20.7	20.4	20.2	19.5	16.2
2359	23/06/2006	21.4	21.4	20.5	20.2	20	19	15.5
559	24/06/2006	19.3	21	21.4	21.3	21.2	20.2	16.8
1159	24/06/2006	19.9	19.8	20.2	20.3	20.4	19.7	16.3
1759	24/06/2006	24.6	21.8	20.3	20	19.9	19.2	15.7
2359	24/06/2006	22.9	22.2	21.1	20.6	20.4	19.3	15.7
559	25/06/2006	21.2	21.9	21.7	21.5	21.3	20.1	16.4
1159	25/06/2006	21.7	21.1	21	20.9	20.8	19.9	16.2
1759	25/06/2006	26.7	23.5	21.5	21.1	20.8	19.9	16
2359	25/06/2006	23.6	23.1	21.7	21.2	20.9	19.5	15.5
559	26/06/2006	21.5	22.8	22.7	22.5	22.4	20.9	16.9
1159	26/06/2006	21.9	21.7	21.8	21.8	21.7	20.6	16.6
1759	26/06/2006	27.6	24.1	22.1	21.7	21.4	20.4	16.2
2359	26/06/2006	25.1	24.2	22.7	22.1	21.7	20.2	15.9
559	27/06/2006	22.9	23.6	23.2	22.9	22.7	21.1	16.6
1159	27/06/2006	24.2	23.5	23.3	23.1	22.9	21.5	17.1
1759	27/06/2006	28.6	25.4	23.4	22.8	22.5	21.1	16.5
2359	27/06/2006	26.3	25.2	23.8	23.2	22.7	20.9	16.1
559	28/06/2006	24.8	25.2	24.7	24.4	24	22.2	17.3
1159	28/06/2006	24.7	24.5	24.3	24.1	23.9	22.3	17.4
1759	28/06/2006	28.9	25.6	23.6	23.2	22.9	21.5	16.3
2359	28/06/2006	26.4	25.7	24.2	23.6	23.3	21.5	16.2
559	29/06/2006	23.5	24.5	24.3	24.2	23.9	22.1	16.7
1159	29/06/2006	22.6	23.5	23.9	23.9	23.8	22.4	17.1
1759	29/06/2006	27.3	25	23.7	23.4	23.3	22.1	16.8
2359	29/06/2006	24.1	24.5	23.8	23.5	23.3	21.9	16.6
559	30/06/2006	21.8	23.7	24.2	24.2	24.1	22.8	17.6

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	30/06/2006	22.6	22.8	23.3	23.4	23.4	22.5	17.6
1759	30/06/2006	26.2	23.9	22.8	22.6	22.4	21.7	16.7
2359	30/06/2006	23.5	23.7	23.1	22.9	22.6	21.6	16.7
559	01/07/2006	21.3	22.7	23.1	23.1	23.1	22	17.3
1159	01/07/2006	22	22.7	23.2	23.3	23.3	22.5	18.1
1759	01/07/2006	25.6	23.4	22.2	22.1	22.1	21.5	17
2359	01/07/2006	23.2	23.4	22.6	22.4	22.3	21.4	17.1
559	02/07/2006	21.3	23.1	23.5	23.5	23.5	22.6	18.5
1159	02/07/2006	22.1	22	22.3	22.5	22.5	21.9	17.9
1759	02/07/2006	27.7	24.5	22.6	22.3	22.1	21.6	17.5
2359	02/07/2006	24	23.9	22.9	22.5	22.3	21.3	17.3
559	03/07/2006	21.6	23.4	23.7	23.7	23.6	22.6	18.7
1159	03/07/2006	22.1	22.2	22.6	22.7	22.6	22	18.2
1759	03/07/2006	27.9	24.4	22.5	22.1	22	21.4	17.5
2359	03/07/2006	24.6	24.3	23.2	22.7	22.4	21.3	17.4
559	04/07/2006	22.5	23.5	23.5	23.4	23.2	22.1	18.1
1159	04/07/2006	23.9	23.5	23.5	23.5	23.4	22.5	18.6
1759	04/07/2006	28.3	25.2	23.2	22.8	22.6	21.7	17.7
2359	04/07/2006	25.3	24.8	23.7	23.3	22.9	21.7	17.6
559	05/07/2006	22.4	23.5	23.5	23.4	23.2	22	17.7
1159	05/07/2006	23.6	23.6	23.7	23.7	23.6	22.7	18.5
1759	05/07/2006	26.4	24.6	23.3	23	22.9	22.1	17.9
2359	05/07/2006	23.4	23.9	23.5	23.3	23.1	22.1	17.9
559	06/07/2006	21.1	22.6	23.1	23.2	23.1	22.2	18.1
1159	06/07/2006	22.6	22.5	22.8	22.9	22.9	22.3	18.4
1759	06/07/2006	24.9	23.8	22.8	22.6	22.5	21.9	18
2359	06/07/2006	23.1	23.3	23	22.8	22.7	21.9	18.1
559	07/07/2006	21.6	22.5	22.7	22.8	22.7	22	18.2
1159	07/07/2006	21.5	22	22.3	22.4	22.4	21.9	18.1
1759	07/07/2006	21.2	21.9	22.2	22.2	22.2	21.9	18.3
2359	07/07/2006	20.1	21.4	21.9	22	22	21.8	18.3
559	08/07/2006	19	20.7	21.5	21.7	21.8	21.7	18.5
1159	08/07/2006	19.3	20.5	21.4	21.7	21.8	21.8	18.9
1759	08/07/2006	21.6	21	20.8	20.9	21	21.2	18.5
2359	08/07/2006	20.2	20.9	20.9	20.9	20.9	21	18.3
559	09/07/2006	18.5	20.1	20.7	20.9	20.9	21	18.5
1159	09/07/2006	19.8	20.1	20.6	20.8	20.9	21.1	18.8
1759	09/07/2006	24.2	22	20.7	20.5	20.4	20.6	18.4
2359	09/07/2006	21.5	21.6	21	20.8	20.7	20.4	18.2
559	10/07/2006	19.2	20.6	21	21.1	21.1	20.7	18.5
1159	10/07/2006	20.9	20.5	20.8	20.9	20.9	20.8	18.6
1759	10/07/2006	21.8	21.3	20.9	20.8	20.8	20.6	18.5
2359	10/07/2006	18.9	20.3	20.8	20.8	20.8	20.6	18.4
559	11/07/2006	16.1	17.8	19.6	20.2	20.5	20.5	18.5
1159	11/07/2006	16.3	17.4	18.8	19.4	19.8	20	18.7
1759	11/07/2006	18.1	18.2	18.5	18.8	19.1	19.6	18.5
2359	11/07/2006	17.1	18.1	18.5	18.7	18.9	19.4	18.5
559	12/07/2006	15.7	17.5	18.5	18.8	19	19.6	18.9
1159	12/07/2006	17.4	17.7	18.5	18.9	19.1	19.8	19.4
1759	12/07/2006	21.5	19	18	18	18.1	18.8	18.5
2359	12/07/2006	19.8	19.5	18.7	18.5	18.4	18.7	18.4
559	13/07/2006	17.9	18.8	18.9	18.9	18.9	19.1	18.7
1159	13/07/2006	19	18.4	18.5	18.6	18.6	18.9	18.6
1759	13/07/2006	20.8	19.3	18.4	18.2	18.2	18.4	18
2359	13/07/2006	19.9	19.8	19.3	19.1	18.9	18.9	18.4
559	14/07/2006	18.5	19.5	19.7	19.7	19.6	19.5	18.9
1159	14/07/2006	18.8	18.6	19	19.1	19.1	19.2	18.7
1759	14/07/2006	22.5	20.3	19.1	18.8	18.8	18.9	18.1
2359	14/07/2006	20	20.2	19.7	19.5	19.3	19.1	18.2
559	15/07/2006	17.8	19	19.4	19.5	19.5	19.3	18.3
1159	15/07/2006	19.1	19	19.3	19.5	19.5	19.5	18.8
1759	15/07/2006	22.6	20.6	19.5	19.2	19.1	19.2	18.3
2359	15/07/2006	19.8	20.2	19.8	19.6	19.4	19.2	18.1
559	16/07/2006	17.8	19.1	19.6	19.7	19.7	19.4	18.3
1159	16/07/2006	19	19.3	19.8	19.9	20	20	19
1759	16/07/2006	22.8	20.6	19.4	19.3	19.2	19.3	18.3
2359	16/07/2006	20.8	20.6	19.7	19.5	19.3	19.1	18
559	17/07/2006	19.1	20.3	20.3	20.3	20.2	20	18.9
1159	17/07/2006	20.1	19.8	20	20	20	20	18.9
1759	17/07/2006	23.8	21.3	19.8	19.5	19.4	19.4	18.1
2359	17/07/2006	21.5	21.3	20.4	20.1	19.9	19.4	18
559	18/07/2006	19.1	20.3	20.4	20.4	20.3	19.7	18.2
1159	18/07/2006	20.4	20.1	20.3	20.3	20.3	20	18.6
1759	18/07/2006	22.2	21.8	21.1	20.9	20.8	20.5	19

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	18/07/2006	20.5	20.8	20.5	20.4	20.2	19.8	18.2
559	19/07/2006	19.1	20.5	20.8	20.9	20.9	20.5	18.9
1159	19/07/2006	20.4	20.1	20.4	20.5	20.6	20.4	18.9
1759	19/07/2006	25.1	22.1	20.5	20.2	20.1	20	18.4
2359	19/07/2006	22.5	22.1	20.9	20.5	20.2	19.7	17.9
559	20/07/2006	20.5	21.7	21.7	21.6	21.4	20.7	18.8
1159	20/07/2006	21.3	21	21.2	21.2	21.1	20.6	18.9
1759	20/07/2006	26.1	23.1	21.4	21	20.8	20.3	18.4
2359	20/07/2006	23.9	23.3	22	21.5	21.2	20.3	18.1
559	21/07/2006	21.6	22.6	22.4	22.3	22	21	18.7
1159	21/07/2006	22.7	22.3	22.3	22.2	22.1	21.3	19
1759	21/07/2006	26.8	24.1	22.5	22	21.8	21.1	18.5
2359	21/07/2006	24.5	24	22.9	22.4	22	20.9	18.2
559	22/07/2006	22.3	23.3	23.2	23	22.8	21.6	18.7
1159	22/07/2006	24	23.6	23.5	23.4	23.3	22.4	19.6
1759	22/07/2006	28.2	25.1	23.2	22.7	22.4	21.6	18.5
2359	22/07/2006	25.5	25	23.7	23.2	22.8	21.5	18.2
559	23/07/2006	23.5	24.5	24.4	24.2	24	22.6	19.2
1159	23/07/2006	23.9	24.2	24.3	24.3	24.1	23.1	19.7
1759	23/07/2006	27.6	25.2	23.8	23.5	23.3	22.4	18.9
2359	23/07/2006	25.4	24.8	23.7	23.3	23	21.9	18.2
559	24/07/2006	23.2	24.1	24	23.9	23.7	22.5	18.7
1159	24/07/2006	23.2	23.9	24.2	24.2	24.1	23.1	19.5
1759	24/07/2006	26.8	24.8	23.7	23.5	23.4	22.7	19
2359	24/07/2006	24.1	24.4	23.7	23.5	23.2	22.3	18.6
559	25/07/2006	21.7	23.4	23.8	23.9	23.8	22.9	19.2
1159	25/07/2006	20.8	21.6	22.1	22.3	22.3	21.8	18.3
1759	25/07/2006	25.1	23.8	22.9	22.8	22.8	22.3	18.9
2359	25/07/2006	22.7	23.5	23.2	23.1	23	22.4	19
559	26/07/2006	20.5	22.3	22.9	23.1	23.1	22.5	19.3
1159	26/07/2006	19.8	21.4	22.3	22.6	22.7	22.4	19.3
1759	26/07/2006	19.7	21	21.8	22.1	22.2	22.2	19.3
2359	26/07/2006	18.6	20.5	21.4	21.7	21.9	22.1	19.4
559	27/07/2006	17.8	19.7	20.9	21.3	21.5	21.8	19.5
1159	27/07/2006	18.6	19.7	20.8	21.1	21.4	21.8	20
1759	27/07/2006	22.7	21.1	20.4	20.5	20.7	21.2	19.5
2359	27/07/2006	20.8	21.2	20.7	20.6	20.6	20.9	19.3
559	28/07/2006	18.4	20.3	21	21.1	21.2	21.4	19.9
1159	28/07/2006	19.7	20.1	20.8	21	21.1	21.4	20.3
1759	28/07/2006	24	21.7	20.6	20.5	20.5	20.8	19.6
2359	28/07/2006	22.1	21.8	21	20.8	20.6	20.6	19.4
559	29/07/2006	20	20.9	21.1	21.1	21	20.8	19.5
1159	29/07/2006	19.6	20.4	20.9	21	21	21	19.7
1759	29/07/2006	20.4	20.3	20.4	20.5	20.6	20.7	19.4
2359	29/07/2006	19.4	20.1	20.2	20.3	20.3	20.4	19.2
559	30/07/2006	18.4	19.8	20.4	20.6	20.6	20.8	19.6
1159	30/07/2006	17.5	19.1	19.9	20.2	20.4	20.7	19.6
1759	30/07/2006	17.8	18.8	19.5	19.8	20	20.5	19.5
2359	30/07/2006	17.1	18.4	19.2	19.5	19.6	20.2	19.5
559	31/07/2006	16.1	17.9	19	19.3	19.5	20.2	19.6
1159	31/07/2006	16.7	17.2	18.1	18.5	18.7	19.6	19.2
1759	31/07/2006	17.7	18.1	18.5	18.6	18.8	19.7	19.5
2359	31/07/2006	16.5	17.6	18.2	18.5	18.6	19.4	19.4
559	01/08/2006	15.3	17.3	18.3	18.7	18.9	19.7	19.9
1159	01/08/2006	16	16.5	17.6	18	18.3	19.3	19.8
1759	01/08/2006	20	18.3	17.6	17.7	17.8	18.9	19.4
2359	01/08/2006	17.8	18.3	18	18	18	18.7	19.3
559	02/08/2006	15.6	17.5	18.2	18.5	18.6	19.2	19.8
1159	02/08/2006	15.9	16.7	17.5	17.9	18.1	19	19.8
1759	02/08/2006	20.8	18.5	17.6	17.7	17.8	18.7	19.5
2359	02/08/2006	18.2	18.4	17.9	17.8	17.7	18.3	19.1
559	03/08/2006	16	17.4	17.8	18	18	18.5	19.3
1159	03/08/2006	16.5	16.8	17.4	17.7	17.8	18.5	19.4
1759	03/08/2006	19.1	18	17.5	17.5	17.5	18.3	19
2359	03/08/2006	17.4	17.9	17.9	17.9	17.8	18.3	19.1
559	04/08/2006	16	17.2	17.7	17.9	18	18.5	19.1
1159	04/08/2006	17.2	17.2	17.8	18	18.1	18.7	19.6
1759	04/08/2006	20.6	19.1	18.3	18.2	18.1	18.7	19.6
2359	04/08/2006	18.7	19	18.5	18.3	18.2	18.5	19.2
559	05/08/2006	16.2	17.7	18.1	18.2	18.2	18.5	19.1
1159	05/08/2006	17.4	17.4	17.8	18.1	18.2	18.7	19.3
1759	05/08/2006	21.2	19.6	18.4	18.3	18.2	18.7	19.4
2359	05/08/2006	18.8	18.9	18.2	18.1	18	18.2	18.7
559	06/08/2006	16.8	18.2	18.5	18.6	18.6	18.7	19.2

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	06/08/2006	17	17.2	17.7	17.9	18	18.3	18.8
1759	06/08/2006	20.7	19	18.2	18.1	18.1	18.4	18.8
2359	06/08/2006	19.3	19.2	18.5	18.3	18.2	18.3	18.5
559	07/08/2006	17.4	18.5	18.6	18.7	18.6	18.6	18.7
1159	07/08/2006	18.8	18.6	18.9	18.9	19	19	19.3
1759	07/08/2006	23.3	20.4	18.8	18.5	18.4	18.5	18.5
2359	07/08/2006	21.5	20.8	19.7	19.3	19	18.6	18.5
559	08/08/2006	19.5	20.1	19.8	19.7	19.6	19	18.6
1159	08/08/2006	19.9	19.8	19.8	19.8	19.8	19.4	18.9
1759	08/08/2006	22	20.7	19.8	19.6	19.5	19.3	18.6
2359	08/08/2006	21	20.8	20.2	19.9	19.8	19.3	18.6
559	09/08/2006	19.7	20.2	20.1	20.1	19.9	19.5	18.6
1159	09/08/2006	20.7	20.5	20.5	20.5	20.5	20.1	19.3
1759	09/08/2006	23.5	21.6	20.2	20	19.8	19.6	18.5
2359	09/08/2006	21.1	21.1	20.5	20.3	20	19.5	18.4
559	10/08/2006	18.6	20.1	20.5	20.6	20.5	20	18.7
1159	10/08/2006	19	19.5	20.2	20.3	20.4	20.2	19.1
1759	10/08/2006	23.3	21.1	19.9	19.8	19.7	19.7	18.4
2359	10/08/2006	21.3	21.3	20.6	20.3	20.2	19.8	18.5
559	11/08/2006	18.9	20.4	20.7	20.8	20.7	20.2	18.9
1159	11/08/2006	18.6	19.4	20	20.3	20.3	20.1	18.8
1759	11/08/2006	19.6	19.6	19.7	19.9	19.9	19.9	18.7
2359	11/08/2006	19.6	20	19.9	19.9	19.9	19.9	18.7
559	12/08/2006	18.3	19.4	19.8	19.9	19.9	19.9	18.8
1159	12/08/2006	19	19.2	19.7	19.8	19.9	20	19.2
1759	12/08/2006	22.5	20.8	19.8	19.7	19.6	19.7	18.8
2359	12/08/2006	20.3	20.5	20	19.9	19.8	19.6	18.6
559	13/08/2006	17.9	19.6	20	20.2	20.2	20	19
1159	13/08/2006	18.6	19.1	19.8	20	20.1	20.1	19.4
1759	13/08/2006	22.9	20.3	19	18.8	18.8	19	18.2
2359	13/08/2006	21.1	21	20.3	20	19.8	19.6	18.6
559	14/08/2006	18.9	20.1	20.3	20.3	20.3	20	18.9
1159	14/08/2006	19.6	19.9	20.3	20.4	20.4	20.3	19.4
1759	14/08/2006	23	21.2	20.2	20	20	19.9	18.9
2359	14/08/2006	21.3	21.2	20.6	20.4	20.2	19.9	18.7
559	15/08/2006	19.4	20.5	20.7	20.7	20.6	20.2	19
1159	15/08/2006	18.8	19.1	19.6	19.7	19.8	19.6	18.4
1759	15/08/2006	19	19.7	20.2	20.3	20.3	20.3	19
2359	15/08/2006	17.9	19.2	19.9	20	20.1	20.2	19
559	16/08/2006	16.6	18.3	19.4	19.7	19.9	20.1	19.1
1159	16/08/2006	16.5	17.4	18.4	18.8	19.1	19.6	18.9
1759	16/08/2006	19.9	18.7	18.5	18.6	18.7	19.4	18.8
2359	16/08/2006	18.6	19.2	19	19	19	19.4	19
559	17/08/2006	16.5	18.1	18.7	19	19.1	19.5	19.2
1159	17/08/2006	16.8	17.5	18.4	18.7	18.8	19.4	19.5
1759	17/08/2006	20.6	19.4	18.7	18.7	18.7	19.4	19.4
2359	17/08/2006	19.1	19.2	18.8	18.7	18.6	19	19
559	18/08/2006	17.5	18.4	18.7	18.8	18.8	19	19
1159	18/08/2006	18.6	18.6	19	19.2	19.2	19.6	19.8
1759	18/08/2006	21.5	19.6	18.4	18.3	18.2	18.6	18.6
2359	18/08/2006	19.8	19.9	19.3	19.1	19	19	18.9
559	19/08/2006	17.5	18.8	19.1	19.2	19.2	19.2	19.1
1159	19/08/2006	17.8	18.2	18.8	19	19.1	19.3	19.3
1759	19/08/2006	20.8	19.6	18.9	18.9	18.9	19.2	19.2
2359	19/08/2006	18.6	19.1	18.9	18.9	18.9	19	18.9
559	20/08/2006	16.6	18.1	18.8	19	19.1	19.2	19
1159	20/08/2006	17.2	17.7	18.5	18.8	18.9	19.3	19.3
1759	20/08/2006	21.3	19.5	18.6	18.6	18.6	19.1	19.1
2359	20/08/2006	19	19.3	18.8	18.7	18.6	18.7	18.7
559	21/08/2006	16.8	18.3	18.8	18.9	19	19.1	19
1159	21/08/2006	17.5	18.1	18.8	19	19.1	19.4	19.6
1759	21/08/2006	21.9	19.9	18.8	18.7	18.7	19	19.1
2359	21/08/2006	19.9	19.7	19.1	18.9	18.8	18.8	18.7
559	22/08/2006	18	19	19.1	19.1	19.1	19	18.8
1159	22/08/2006	18.8	19	19.4	19.5	19.6	19.6	19.5
1759	22/08/2006	22.4	20.3	19.1	18.9	18.9	18.9	18.7
2359	22/08/2006	21	20.7	19.9	19.6	19.5	19.2	18.8
559	23/08/2006	19.5	20.1	20	19.9	19.8	19.4	18.9
1159	23/08/2006	18.9	19.6	19.8	19.9	19.9	19.6	19
1759	23/08/2006	19	19.4	19.6	19.7	19.7	19.7	19.1
2359	23/08/2006	18.1	19.1	19.3	19.5	19.5	19.6	18.9
559	24/08/2006	16.5	18.3	19	19.3	19.4	19.6	19
1159	24/08/2006	17.5	18	18.8	19.1	19.2	19.6	19.4
1759	24/08/2006	21.5	19.6	18.5	18.4	18.5	18.9	18.6

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
2359	24/08/2006	19.5	19.6	19.1	19	18.9	19	18.7
559	25/08/2006	17.6	18.8	19.1	19.2	19.2	19.2	18.9
1159	25/08/2006	17.7	18.5	19.1	19.3	19.4	19.6	19.5
1759	25/08/2006	21.4	19.6	18.7	18.6	18.6	19	18.8
2359	25/08/2006	19.4	19.7	19.2	19.1	19	19.1	18.8
559	26/08/2006	17.4	18.8	19.1	19.3	19.3	19.3	19
1159	26/08/2006	17.7	18.3	18.9	19.1	19.2	19.4	19.2
1759	26/08/2006	21.3	19.6	18.7	18.7	18.7	19	18.7
2359	26/08/2006	19.5	19.8	19.3	19.2	19.1	19.1	18.9
559	27/08/2006	17.2	18.8	19.3	19.5	19.5	19.4	19.1
1159	27/08/2006	17.3	18.1	18.8	19.1	19.2	19.4	19.3
1759	27/08/2006	21.2	19.7	18.8	18.8	18.9	19.2	19
2359	27/08/2006	19.1	19.6	19.2	19.1	19.1	19.1	18.9
559	28/08/2006	17.3	18.6	19.1	19.2	19.3	19.3	19
1159	28/08/2006	17.7	18.3	18.8	19.1	19.2	19.4	19.2
1759	28/08/2006	20.8	19.4	18.8	18.8	18.8	19.1	19
2359	28/08/2006	19.8	19.7	19.2	19.1	19	19	18.8
559	29/08/2006	18.3	19.1	19.2	19.2	19.2	19.1	18.9
1159	29/08/2006	18.8	19.3	19.6	19.8	19.8	19.8	19.6
1759	29/08/2006	20.3	19.4	19	19	19.1	19.2	18.9
2359	29/08/2006	19.2	19.5	19.3	19.2	19.2	19.2	18.9
559	30/08/2006	17.9	18.9	19.2	19.4	19.4	19.4	19.1
1159	30/08/2006	17.3	18.5	19.1	19.3	19.4	19.6	19.3
1759	30/08/2006	17.4	18.1	18.6	18.8	18.9	19.3	19.1
2359	30/08/2006	16.5	17.8	18.4	18.7	18.8	19.3	19.1
559	31/08/2006	15.3	17.1	18.1	18.4	18.6	19.2	19.2
1159	31/08/2006	15.4	16.6	17.7	18.1	18.3	19	19.3
1759	31/08/2006	17.3	17	17.3	17.5	17.7	18.5	19
2359	31/08/2006	15.8	17.1	17.4	17.6	17.7	18.5	19
559	01/09/2006	13.7	16	17.2	17.6	17.8	18.6	19.3
1159	01/09/2006	14.4	15.7	17	17.4	17.7	18.7	19.8
1759	01/09/2006	18.4	16.8	16.3	16.4	16.6	17.7	18.8
2359	01/09/2006	17	17.2	17	17	17	17.7	18.9
559	02/09/2006	15.1	16.4	16.9	17.1	17.2	17.8	19
1159	02/09/2006	16.2	16.5	17.2	17.4	17.6	18.2	19.7
1759	02/09/2006	20.6	18.1	16.9	16.8	16.8	17.5	18.8
2359	02/09/2006	18.8	18.4	17.6	17.3	17.2	17.5	18.6
559	03/09/2006	16.7	17.7	17.7	17.7	17.7	17.8	18.8
1159	03/09/2006	17.1	17.3	17.7	17.8	17.9	18.1	19.2
1759	03/09/2006	21.4	19	17.6	17.4	17.4	17.7	18.5
2359	03/09/2006	19.5	19.2	18.2	18	17.8	17.8	18.4
559	04/09/2006	17.3	18.3	18.4	18.4	18.4	18.2	18.7
1159	04/09/2006	17.9	18.2	18.6	18.8	18.8	18.8	19.5
1759	04/09/2006	21.9	19.5	18.2	18	18	18.1	18.5
2359	04/09/2006	20	19.7	18.9	18.7	18.5	18.3	18.6
559	05/09/2006	17.9	18.8	18.9	18.8	18.8	18.5	18.6
1159	05/09/2006	17.8	18.4	18.8	19	19	18.9	19.1
1759	05/09/2006	20.7	19.2	18.6	18.5	18.5	18.5	18.6
2359	05/09/2006	19.4	19.4	18.9	18.8	18.7	18.6	18.5
559	06/09/2006	17.8	18.8	19	19	19	18.8	18.7
1159	06/09/2006	18.3	18.8	19.2	19.4	19.4	19.4	19.4
1759	06/09/2006	20.3	19.2	18.6	18.5	18.5	18.6	18.5
2359	06/09/2006	18.7	19.1	18.9	18.9	18.8	18.8	18.7
559	07/09/2006	17.2	18.4	18.8	18.9	19	18.9	18.8
1159	07/09/2006	17.2	18.2	18.8	19	19.1	19.3	19.2
1759	07/09/2006	18.7	18.3	18.2	18.3	18.4	18.7	18.7
2359	07/09/2006	17.5	18.3	18.3	18.4	18.5	18.7	18.7
559	08/09/2006	15.8	17.4	18.1	18.4	18.5	18.7	18.8
1159	08/09/2006	16.2	17.3	18.2	18.5	18.7	19.1	19.5
1759	08/09/2006	19.6	18.2	17.5	17.6	17.7	18.2	18.6
2359	08/09/2006	18.3	18.5	18.1	18.1	18.1	18.4	18.8
559	09/09/2006	16.7	17.8	18.1	18.2	18.2	18.4	18.8
1159	09/09/2006	17	17.6	18.2	18.4	18.5	18.8	19.3
1759	09/09/2006	19.8	18.4	17.8	17.8	17.8	18.2	18.7
2359	09/09/2006	18.5	18.5	18.1	18.1	18	18.2	18.6
559	10/09/2006	16.8	17.9	18.2	18.2	18.3	18.4	18.7
1159	10/09/2006	17.6	18.3	18.8	18.9	19	19.2	19.8
1759	10/09/2006	20.3	18.9	18.1	18	18	18.4	18.7
2359	10/09/2006	18.4	18.8	18.5	18.5	18.4	18.5	18.9
559	11/09/2006	16.4	17.8	18.3	18.4	18.4	18.5	18.8
1159	11/09/2006	16.5	17.3	18.1	18.3	18.5	18.7	19.2
1759	11/09/2006	19.4	18.2	17.6	17.6	17.7	18.1	18.5
2359	11/09/2006	17.2	18.1	18.1	18.1	18.1	18.3	18.7
559	12/09/2006	14.9	17	17.9	18.1	18.3	18.5	18.9

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)						
		5	10	20	25	30	40	90
1159	12/09/2006	15	16.3	17.4	17.8	18	18.5	19.2
1759	12/09/2006	18.4	17.3	16.9	17	17.2	17.9	18.5
2359	12/09/2006	16.1	17.2	17.3	17.4	17.5	18	18.7
559	13/09/2006	13.9	16.2	17.2	17.5	17.7	18.2	19
1159	13/09/2006	13.9	15.4	16.7	17.2	17.4	18.2	19.3
1759	13/09/2006	17.7	16.6	16.2	16.4	16.6	17.5	18.6
2359	13/09/2006	16	16.7	16.8	16.9	17	17.7	18.8
559	14/09/2006	14	15.9	16.7	16.9	17.1	17.8	19
1159	14/09/2006	12.5	14.9	16.2	16.6	16.9	17.7	19
1759	14/09/2006	13.1	14.5	15.6	16	16.3	17.3	18.8
2359	14/09/2006	11.7	14.1	15.4	15.9	16.2	17.3	18.9
559	15/09/2006	10.4	13.2	14.9	15.5	15.8	17.1	19
1159	15/09/2006	10.8	12.9	14.6	15.1	15.5	17	19.3
1759	15/09/2006	13.3	13.3	13.7	14.2	14.5	16.1	18.5
2359	15/09/2006	11.5	13.3	14	14.4	14.6	16.1	18.8
559	16/09/2006	9.9	12.4	13.7	14.2	14.6	16	18.9
1159	16/09/2006	10.3	12.4	13.9	14.4	14.8	16.4	19.5
1759	16/09/2006	11.6	12.2	12.9	13.3	13.7	15.4	18.6
2359	16/09/2006	10.3	12.1	13.1	13.4	13.7	15.3	18.7
559	17/09/2006	8.7	10.9	12.7	13.2	13.6	15.2	18.7
1159	17/09/2006	9	10.6	12.3	12.9	13.3	15.1	18.8
1759	17/09/2006	10.3	10.9	11.8	12.3	12.7	14.6	18.5
2359	17/09/2006	10.1	11.1	11.8	12.2	12.5	14.3	18.4
559	18/09/2006	9.6	10.9	11.8	12.2	12.6	14.3	18.5
1159	18/09/2006	9.7	10.9	11.8	12.3	12.6	14.4	18.7
1759	18/09/2006	11.1	10.8	11.1	11.4	11.7	13.5	17.9
2359	18/09/2006	10.5	11.3	11.6	11.9	12.1	13.7	18.1
559	19/09/2006	8.7	10.5	11.5	11.9	12.2	13.8	18.1
1159	19/09/2006	9	10.3	11.6	12.1	12.4	14.1	18.7
1759	19/09/2006	11.3	10.8	10.8	11.1	11.4	13.2	17.8
2359	19/09/2006	11	11.3	11.4	11.5	11.7	13.3	17.8
559	20/09/2006	10	10.9	11.3	11.6	11.8	13.2	17.7
1159	20/09/2006	10.1	10.6	11.3	11.6	11.8	13.3	17.8
1759	20/09/2006	11.4	11.2	11.3	11.5	11.7	13.1	17.6
2359	20/09/2006	11.2	11.4	11.6	11.7	11.8	13.2	17.6
559	21/09/2006	10.5	11.2	11.6	11.8	11.9	13.2	17.5
1159	21/09/2006	10.8	11.4	11.9	12.1	12.3	13.5	17.9
1759	21/09/2006	12.1	11.8	11.8	11.9	12.1	13.3	17.6
2359	21/09/2006	11.5	11.7	11.7	11.8	11.9	13.1	17.2
559	22/09/2006	10.6	11.4	11.7	11.9	12	13.1	17.2
1159	22/09/2006	10.9	11.5	12	12.2	12.4	13.5	17.6
1759	22/09/2006	12.8	11.5	11.1	11.2	11.3	12.5	16.6
2359	22/09/2006	11.8	12.2	12	12	12.1	13.1	17
559	23/09/2006	10.1	11.5	12	12.2	12.4	13.3	17.1
1159	23/09/2006	10.1	11	11.8	12.2	12.4	13.4	17.4
1759	23/09/2006	12.9	11.8	11.4	11.6	11.7	12.9	16.7
2359	23/09/2006	11.8	12.4	12.4	12.4	12.5	13.4	17.2
559	24/09/2006	10.6	11.5	11.9	12.2	12.3	13.2	17
1159	24/09/2006	10.8	11.3	11.9	12.1	12.3	13.3	17.1
1759	24/09/2006	13.5	12	11.4	11.5	11.6	12.7	16.3
2359	24/09/2006	12	12.4	12.2	12.2	12.3	13.1	16.7
559	25/09/2006	11.1	11.8	12.1	12.3	12.4	13.2	16.8
1159	25/09/2006	11.4	11.9	12.3	12.5	12.6	13.5	17
1759	25/09/2006	12.4	12	12	12.1	12.2	13.1	16.5
2359	25/09/2006	11.7	12.1	12.1	12.2	12.3	13.1	16.5
559	26/09/2006	10.7	11.7	12.2	12.3	12.5	13.3	16.6
1159	26/09/2006	10.5	11.5	12.1	12.4	12.6	13.5	16.8
1759	26/09/2006	11.5	11.4	11.7	11.9	12.1	13.2	16.5
2359	26/09/2006	10.1	11.4	11.8	12.1	12.2	13.2	16.5
559	27/09/2006	8.3	10.4	11.5	11.9	12.2	13.2	16.6
1159	27/09/2006	8.6	10.1	11.4	11.9	12.2	13.5	17.1
1759	27/09/2006	10.5	10.3	10.6	10.9	11.2	12.6	16.3
2359	27/09/2006	10.3	10.8	11.1	11.2	11.4	12.7	16.5
559	28/09/2006	10.1	10.7	11.1	11.3	11.5	12.7	16.5
1159	28/09/2006	10.3	10.5	11	11.2	11.4	12.6	16.5
1759	28/09/2006	11.7	11.2	11	11	11.2	12.3	16.2
2359	28/09/2006	10.7	11.2	11.2	11.3	11.4	12.4	16.1
559	29/09/2006	9.6	10.8	11.4	11.6	11.7	12.7	16.4
1159	29/09/2006	9.2	10.2	10.9	11.3	11.5	12.5	16.3
1759	29/09/2006	10.8	10.5	10.7	10.9	11.1	12.3	16.1
2359	29/09/2006	10.3	10.8	11	11.1	11.2	12.3	16.1
559	30/09/2006	9.4	10.4	10.9	11.2	11.3	12.4	16.2
1159	30/09/2006	10.1	10.7	11.2	11.5	11.7	12.8	16.6
1759	30/09/2006	11.6	10.7	10.4	10.5	10.7	11.8	15.6

MLSB Coke Deep Cover Soil Temperature (deg C)

time	date	Sensor Depth (cm)							
		5	10	20	25	30	40	90	180
2359	30/09/2006	10.5	11.2	11.2	11.2	11.3	12.3	16.1	18
559	01/10/2006	8.9	10.4	11.2	11.4	11.6	12.5	16.3	18.2
1159	01/10/2006	9.1	9.8	10.6	11	11.2	12.3	16.1	18.1
1759	01/10/2006	10.9	10.5	10.5	10.7	10.9	12.1	15.9	17.8
2359	01/10/2006	10	10.6	10.8	10.9	11.1	12.2	16	18
559	02/10/2006	9	10	10.6	10.9	11.1	12.1	15.9	18
1159	02/10/2006	8.9	10	10.8	11.1	11.3	12.5	16.4	18.4
1759	02/10/2006	10.2	9.8	10	10.2	10.4	11.7	15.6	17.6
2359	02/10/2006	9	9.9	10.3	10.5	10.7	11.8	15.7	17.8
559	03/10/2006	7.1	9	10.1	10.5	10.7	11.9	15.8	17.9
1159	03/10/2006	7.2	8.8	10.1	10.5	10.8	12.2	16.3	18.4
1759	03/10/2006	8.7	8.5	8.8	9.2	9.5	11	15.2	17.3
2359	03/10/2006	7.9	8.9	9.3	9.6	9.8	11.3	15.5	17.7
559	04/10/2006	6.5	8.3	9.2	9.6	9.9	11.3	15.6	17.8
1159	04/10/2006	6.5	7.9	9.1	9.6	9.9	11.4	16	18.2
1759	04/10/2006	8.9	8.3	8.2	8.6	8.9	10.5	15.1	17.3
2359	04/10/2006	8.1	8.7	8.9	9.1	9.3	10.7	15.4	17.7
559	05/10/2006	7.5	8.4	8.9	9.2	9.4	10.8	15.4	17.7
1159	05/10/2006	8	8.8	9.5	9.8	10	11.4	16.2	18.5

## **Shallow Cover - Matric Suction Data**



MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	12/04/2005	5	12	6	78	0	76	59	57
17:35	12/04/2005	11	10	19	87	0	57	83	74
23:35	12/04/2005	2	13	16	93	0	73	71	46
05:35	13/04/2005	4	5	16	96	0	75	71	44
11:35	13/04/2005	9	7	12	110	0	42	67	44
17:35	13/04/2005	2	12	12	90	0	60	66	42
23:35	13/04/2005	4	8	27	96	0	45	57	46
05:35	14/04/2005	6	12	17	91	0	56	47	57
11:35	14/04/2005	9	5	16	99	1	46	68	43
17:35	14/04/2005	9	11	14	96	0	58	69	43
23:35	14/04/2005	1	12	21	120	0	58	56	41
05:35	15/04/2005	2	7	13	128	0	56	55	43
11:35	15/04/2005	4	11	19	107	0	76	70	53
17:35	15/04/2005	6	9	21	128	0	56	68	47
23:35	15/04/2005	2	7	11	131	2	44	57	44
05:35	16/04/2005	5	4	9	92	0	54	88	42
11:35	16/04/2005	6	13	9	126	0	82	77	44
17:35	16/04/2005	7	9	16	117	1	110	87	39
23:35	16/04/2005	2	8	5	147	1	79	81	44
05:35	17/04/2005	4	8	7	121	0	58	58	44
11:35	17/04/2005	2	12	13	110	1	81	65	57
17:35	17/04/2005	7	12	9	175	0	73	74	65
23:35	17/04/2005	5	12	0	141	0	36	72	43
05:35	18/04/2005	5	8	14	141	0	57	57	42
11:35	18/04/2005	6	12	4	127	0	80	48	55
17:35	18/04/2005	7	11	4	169	0	88	66	38
23:35	18/04/2005	4	11	1	124	0	78	77	42
05:35	19/04/2005	5	4	0	97	2	71	55	40
11:35	19/04/2005	7	9	0	136	0	66	84	44
17:35	19/04/2005	9	13	1	154	1	76	82	51
23:35	19/04/2005	12	6	20	154	5	68	67	46
05:35	20/04/2005	6	15	19	141	0	50	75	55
11:35	20/04/2005	11	13	15	136	0	77	81	54
17:35	20/04/2005	21	18	17	124	2	82	83	53
23:35	20/04/2005	15	26	21	66	4	65	54	55
05:35	21/04/2005	10	17	15	29	0	48	56	42
11:35	21/04/2005	22	22	13	18	0	69	70	43
17:35	21/04/2005	25	30	17	19	0	84	80	50
23:35	21/04/2005	25	51	12	20	0	106	71	34
05:35	22/04/2005	23	26	11	17	0	59	49	37
11:35	22/04/2005	29	32	14	12	0	75	74	46
17:35	22/04/2005	44	53	20	18	18	94	103	57
23:35	22/04/2005	37	43	14	7	17	75	96	57
05:35	23/04/2005	35	41	12	6	15	48	62	41
11:35	23/04/2005	38	47	13	12	16	55	71	32
17:35	23/04/2005	44	71	10	12	18	94	62	46
23:35	23/04/2005	42	66	17	11	19	49	65	38
05:35	24/04/2005	42	60	16	5	14	89	57	46
11:35	24/04/2005	52	62	14	11	17	71	58	53
17:35	24/04/2005	49	67	18	14	18	76	80	46
23:35	24/04/2005	49	94	16	16	16	77	67	35
05:35	25/04/2005	49	90	14	10	18	86	68	35
11:35	25/04/2005	54	67	26	12	16	61	52	37
17:35	25/04/2005	53	70	35	9	17	74	94	43
23:35	25/04/2005	54	79	18	23	17	63	64	30
05:35	26/04/2005	54	100	17	16	20	53	75	35
11:35	26/04/2005	53	58	16	16	10	40	83	33
17:35	26/04/2005	43	51	24	16	20	54	55	25
23:35	26/04/2005	44	85	18	16	21	39	70	31
05:35	27/04/2005	60	84	25	16	19	50	68	25
11:35	27/04/2005	61	83	26	8	20	39	69	31
17:35	27/04/2005	59	86	39	14	22	50	70	41
23:35	27/04/2005	47	65	38	12	16	51	52	23
05:35	28/04/2005	49	69	38	12	20	58	51	30
11:35	28/04/2005	63	70	28	8	11	57	52	29
17:35	28/04/2005	60	61	33	14	24	51	71	24
23:35	28/04/2005	61	91	44	19	13	63	53	27
05:35	29/04/2005	63	55	42	14	23	74	52	29
11:35	29/04/2005	63	87	53	14	18	57	61	20
17:35	29/04/2005	66	75	47	15	19	60	52	22
23:35	29/04/2005	65	77	48	15	25	61	51	29
05:35	30/04/2005	84	92	38	10	20	58	50	27
11:35	30/04/2005	56	101	48	20	25	58	60	21
17:35	30/04/2005	93	81	64	24	23	63	66	32

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	30/04/2005	87	64	42	18	28	46	54	37
05:35	01/05/2005	67	97	40	24	28	37	51	28
11:35	01/05/2005	74	84	42	13	23	36	66	38
17:35	01/05/2005	69	93	50	15	26	70	75	31
23:35	01/05/2005	79	77	47	25	30	63	65	29
05:35	02/05/2005	64	93	57	17	23	44	49	34
11:35	02/05/2005	84	123	55	30	36	43	66	32
17:35	02/05/2005	71	102	51	27	34	65	74	35
23:35	02/05/2005	89	86	69	34	39	54	60	32
05:35	03/05/2005	49	92	56	22	25	45	64	25
11:35	03/05/2005	89	102	62	30	34	67	71	34
17:35	03/05/2005	71	103	68	32	48	71	102	40
23:35	03/05/2005	61	115	58	35	41	73	80	35
05:35	04/05/2005	80	92	72	23	28	46	47	30
11:35	04/05/2005	77	96	56	39	36	64	68	44
17:35	04/05/2005	63	97	62	33	36	72	77	49
23:35	04/05/2005	81	78	56	38	42	77	85	44
05:35	05/05/2005	62	76	56	32	37	60	59	29
11:35	05/05/2005	80	104	60	33	37	69	81	37
17:35	05/05/2005	61	85	57	50	45	82	73	45
23:35	05/05/2005	66	67	64	30	32	46	64	32
05:35	06/05/2005	52	69	59	35	49	57	63	23
11:35	06/05/2005	41	71	49	30	33	45	62	24
17:35	06/05/2005	54	74	54	41	29	65	71	46
23:35	06/05/2005	54	68	62	35	31	42	65	32
05:35	07/05/2005	49	61	54	33	44	49	64	27
11:35	07/05/2005	61	79	49	38	34	58	66	33
17:35	07/05/2005	70	81	58	35	31	68	75	38
23:35	07/05/2005	44	100	50	31	42	45	82	19
05:35	08/05/2005	70	84	35	22	37	58	47	31
11:35	08/05/2005	70	87	57	37	38	64	78	37
17:35	08/05/2005	61	85	67	39	42	70	86	41
23:35	08/05/2005	55	63	49	23	43	57	108	26
05:35	09/05/2005	58	67	36	24	25	50	61	32
11:35	09/05/2005	57	48	52	33	29	42	44	25
17:35	09/05/2005	68	88	75	30	39	47	62	30
23:35	09/05/2005	56	66	54	28	29	23	66	26
05:35	10/05/2005	55	59	49	26	27	45	57	25
11:35	10/05/2005	51	56	56	36	30	40	68	29
17:35	10/05/2005	56	76	52	39	42	45	62	29
23:35	10/05/2005	59	84	74	31	33	55	47	29
05:35	11/05/2005	57	83	33	28	34	36	61	25
11:35	11/05/2005	73	89	56	36	35	49	70	32
17:35	11/05/2005	68	94	66	41	43	59	80	28
23:35	11/05/2005	53	94	72	37	36	66	84	44
05:35	12/05/2005	64	69	45	41	32	50	54	28
11:35	12/05/2005	71	91	60	39	38	51	77	37
17:35	12/05/2005	62	83	57	57	38	60	67	39
23:35	12/05/2005	61	66	60	32	33	51	55	22
05:35	13/05/2005	60	108	44	23	37	26	61	25
11:35	13/05/2005	65	79	50	34	34	53	62	39
17:35	13/05/2005	58	82	46	37	38	45	86	27
23:35	13/05/2005	61	74	52	36	44	40	76	41
05:35	14/05/2005	63	55	36	31	39	45	52	29
11:35	14/05/2005	77	92	64	40	39	47	69	34
17:35	14/05/2005	69	102	70	44	45	54	82	40
23:35	14/05/2005	65	106	60	40	49	45	91	27
05:35	15/05/2005	68	97	41	34	34	32	64	31
11:35	15/05/2005	77	97	64	44	41	51	78	40
17:35	15/05/2005	70	91	70	43	45	52	64	41
23:35	15/05/2005	69	84	76	33	51	48	74	29
05:35	16/05/2005	94	65	54	37	34	54	68	26
11:35	16/05/2005	76	96	65	44	44	49	82	38
17:35	16/05/2005	71	93	72	46	44	59	91	47
23:35	16/05/2005	68	63	57	40	40	46	57	39
05:35	17/05/2005	66	72	40	35	35	27	53	51
11:35	17/05/2005	65	96	50	36	27	47	60	32
17:35	17/05/2005	73	86	65	41	49	45	76	49
23:35	17/05/2005	55	77	53	42	33	38	63	42
05:35	18/05/2005	72	86	61	48	38	56	67	35
11:35	18/05/2005	66	77	54	45	29	35	62	33
17:35	18/05/2005	4	10	54	36	34	36	62	33
23:35	18/05/2005	5	7	38	29	29	38	65	44
05:35	19/05/2005	5	11	54	40	29	33	51	42

## MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	19/05/2005	5	11	31	38	44	36	62	40
17:35	19/05/2005	4	18	27	38	41	39	76	37
23:35	19/05/2005	5	10	21	34	29	35	63	27
05:35	20/05/2005	5	15	19	33	27	36	61	41
11:35	20/05/2005	6	12	22	36	36	39	68	36
17:35	20/05/2005	11	14	24	41	42	47	78	43
23:35	20/05/2005	16	27	21	44	36	31	69	47
05:35	21/05/2005	12	21	18	38	33	31	57	30
11:35	21/05/2005	25	30	25	34	37	42	79	40
17:35	21/05/2005	31	40	31	41	44	61	89	36
23:35	21/05/2005	35	33	22	31	34	33	66	34
05:35	22/05/2005	24	30	27	23	26	33	55	31
11:35	22/05/2005	26	35	26	39	42	36	66	33
17:35	22/05/2005	31	40	29	34	47	51	74	30
23:35	22/05/2005	31	47	25	23	33	42	59	30
05:35	23/05/2005	33	46	23	27	37	27	53	31
11:35	23/05/2005	47	54	25	27	30	38	73	39
17:35	23/05/2005	38	60	23	39	33	39	52	34
23:35	23/05/2005	35	44	27	21	37	31	56	16
05:35	24/05/2005	39	43	35	33	30	27	44	39
11:35	24/05/2005	38	44	30	26	36	28	54	30
17:35	24/05/2005	39	49	33	29	40	38	71	30
23:35	24/05/2005	39	45	30	28	30	28	64	29
05:35	25/05/2005	45	48	25	23	30	29	54	30
11:35	25/05/2005	34	34	25	29	36	27	42	26
17:35	25/05/2005	24	39	32	29	37	20	53	15
23:35	25/05/2005	38	29	34	29	31	27	54	23
05:35	26/05/2005	40	38	32	21	31	26	63	15
11:35	26/05/2005	31	40	34	38	32	30	58	32
17:35	26/05/2005	29	44	38	36	39	32	67	26
23:35	26/05/2005	32	32	35	41	28	40	54	31
05:35	27/05/2005	42	37	28	28	29	26	60	27
11:35	27/05/2005	38	46	34	33	36	41	75	26
17:35	27/05/2005	33	48	29	38	39	35	66	37
23:35	27/05/2005	44	43	44	33	42	30	76	33
05:35	28/05/2005	35	32	37	27	36	26	42	25
11:35	28/05/2005	35	47	34	30	34	28	58	31
17:35	28/05/2005	33	53	43	40	42	40	79	39
23:35	28/05/2005	38	45	34	27	36	34	56	35
05:35	29/05/2005	38	44	30	29	23	26	53	29
11:35	29/05/2005	45	55	38	35	37	36	74	37
17:35	29/05/2005	38	56	44	41	43	40	84	44
23:35	29/05/2005	42	39	36	33	36	34	70	39
05:35	30/05/2005	41	45	30	27	30	37	56	38
11:35	30/05/2005	50	63	43	37	37	36	83	37
17:35	30/05/2005	45	63	47	40	43	40	89	44
23:35	30/05/2005	41	53	40	33	37	36	73	40
05:35	31/05/2005	43	48	31	29	25	26	76	33
11:35	31/05/2005	47	61	43	34	37	39	82	43
17:35	31/05/2005	40	59	50	40	42	42	100	48
23:35	31/05/2005	41	51	36	32	34	33	72	37
05:35	01/06/2005	41	46	30	26	28	25	62	33
11:35	01/06/2005	46	55	38	32	32	31	73	31
17:35	01/06/2005	38	56	45	35	36	36	85	41
23:35	01/06/2005	41	62	36	30	31	27	64	35
05:35	02/06/2005	55	46	33	26	23	24	69	31
11:35	02/06/2005	47	53	41	30	29	25	70	38
17:35	02/06/2005	43	59	44	35	36	33	83	42
23:35	02/06/2005	59	50	40	24	27	36	68	40
05:35	03/06/2005	47	49	35	35	30	32	60	42
11:35	03/06/2005	46	61	44	32	34	29	70	37
17:35	03/06/2005	39	60	51	38	38	33	85	46
23:35	03/06/2005	44	49	41	26	33	28	69	50
05:35	04/06/2005	56	49	27	27	22	16	46	24
11:35	04/06/2005	45	52	40	28	28	22	61	25
17:35	04/06/2005	46	56	47	33	35	29	73	38
23:35	04/06/2005	46	57	40	31	31	26	82	28
05:35	05/06/2005	50	51	35	28	28	22	55	31
11:35	05/06/2005	54	64	45	34	31	26	67	39
17:35	05/06/2005	46	62	53	37	37	30	77	42
23:35	05/06/2005	47	50	41	30	25	25	61	36
05:35	06/06/2005	49	50	36	27	27	20	67	30
11:35	06/06/2005	56	70	55	38	36	28	74	43
17:35	06/06/2005	43	60	48	37	35	28	76	41

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	06/06/2005	50	54	45	31	39	25	63	47
05:35	07/06/2005	65	48	36	28	27	19	54	39
11:35	07/06/2005	59	72	58	37	36	28	76	42
17:35	07/06/2005	47	64	56	38	36	32	81	46
23:35	07/06/2005	50	56	47	34	30	24	66	38
05:35	08/06/2005	64	52	35	29	21	26	51	23
11:35	08/06/2005	57	66	50	34	34	29	75	41
17:35	08/06/2005	46	64	54	40	37	31	82	47
23:35	08/06/2005	50	54	44	33	32	25	69	39
05:35	09/06/2005	53	53	39	30	28	21	59	33
11:35	09/06/2005	56	62	49	34	33	26	72	41
17:35	09/06/2005	48	53	45	33	33	26	69	39
23:35	09/06/2005	53	54	42	39	23	22	61	26
05:35	10/06/2005	53	52	30	28	27	19	54	29
11:35	10/06/2005	55	59	42	30	28	21	57	31
17:35	10/06/2005	37	58	47	33	30	23	61	36
23:35	10/06/2005	53	52	31	28	26	25	41	38
05:35	11/06/2005	57	67	39	26	25	15	49	36
11:35	11/06/2005	59	58	45	29	28	25	51	23
17:35	11/06/2005	53	58	35	32	28	20	53	31
23:35	11/06/2005	49	76	42	31	28	27	62	31
05:35	12/06/2005	62	59	35	37	22	20	41	15
11:35	12/06/2005	50	60	45	33	29	17	51	38
17:35	12/06/2005	60	62	38	33	29	18	51	38
23:35	12/06/2005	66	64	52	34	38	19	54	22
05:35	13/06/2005	66	70	52	34	38	19	51	31
11:35	13/06/2005	66	66	54	44	32	19	53	23
17:35	13/06/2005	57	71	61	38	35	23	60	33
23:35	13/06/2005	41	60	54	31	34	21	54	44
05:35	14/06/2005	20	48	52	38	34	20	53	32
11:35	14/06/2005	9	27	50	36	33	22	53	33
17:35	14/06/2005	14	24	59	42	48	24	61	47
23:35	14/06/2005	13	22	44	37	33	20	66	39
05:35	15/06/2005	12	27	48	36	33	18	49	30
11:35	15/06/2005	4	12	38	37	41	26	51	23
17:35	15/06/2005	5	10	36	37	33	21	51	24
23:35	15/06/2005	4	9	28	44	34	19	50	31
05:35	16/06/2005	1	14	17	33	33	20	51	40
11:35	16/06/2005	5	10	24	34	42	19	46	31
17:35	16/06/2005	5	11	22	38	37	21	57	35
23:35	16/06/2005	5	15	28	34	34	21	65	44
05:35	17/06/2005	1	8	18	30	28	16	54	20
11:35	17/06/2005	7	13	24	35	36	23	54	34
17:35	17/06/2005	6	12	22	35	36	21	59	35
23:35	17/06/2005	7	13	21	24	32	14	51	33
05:35	18/06/2005	7	12	24	24	26	16	53	27
11:35	18/06/2005	13	19	22	28	31	19	56	32
17:35	18/06/2005	11	18	26	35	35	25	60	36
23:35	18/06/2005	13	21	25	32	39	21	54	26
05:35	19/06/2005	13	17	13	24	25	16	37	21
11:35	19/06/2005	21	29	29	35	35	28	69	42
17:35	19/06/2005	17	23	24	30	31	16	46	44
23:35	19/06/2005	18	21	17	24	28	20	51	41
05:35	20/06/2005	10	15	20	23	24	10	44	27
11:35	20/06/2005	22	29	24	30	32	22	59	35
17:35	20/06/2005	20	28	29	31	36	23	69	39
23:35	20/06/2005	21	27	24	34	24	15	54	45
05:35	21/06/2005	22	26	30	31	27	19	51	39
11:35	21/06/2005	25	32	28	29	30	23	62	38
17:35	21/06/2005	28	35	33	33	36	28	73	46
23:35	21/06/2005	23	28	23	32	22	14	54	26
05:35	22/06/2005	25	29	23	25	27	20	53	32
11:35	22/06/2005	24	30	26	24	27	18	54	53
17:35	22/06/2005	4	8	32	24	25	17	52	22
23:35	22/06/2005	4	9	17	22	25	17	48	29
05:35	23/06/2005	3	8	8	23	22	17	59	40
11:35	23/06/2005	3	4	7	21	24	10	39	29
17:35	23/06/2005	3	8	7	12	10	21	59	38
23:35	23/06/2005	3	8	8	8	11	17	46	22
05:35	24/06/2005	3	7	11	10	9	15	38	19
11:35	24/06/2005	5	10	10	8	13	19	56	35
17:35	24/06/2005	6	11	11	10	14	24	60	35
23:35	24/06/2005	1	10	5	8	17	22	51	34
05:35	25/06/2005	5	8	9	3	12	12	42	32

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	25/06/2005	5	9	9	7	12	24	51	39
17:35	25/06/2005	4	9	8	6	12	18	50	30
23:35	25/06/2005	5	15	9	12	13	19	52	35
05:35	26/06/2005	4	5	8	5	11	16	46	23
11:35	26/06/2005	5	10	10	7	13	18	55	44
17:35	26/06/2005	5	11	10	9	15	22	57	36
23:35	26/06/2005	4	10	6	8	8	26	53	24
05:35	27/06/2005	3	8	8	3	11	22	56	28
11:35	27/06/2005	5	7	11	8	13	20	55	33
17:35	27/06/2005	7	15	12	10	15	24	63	38
23:35	27/06/2005	7	13	11	8	13	18	58	38
05:35	28/06/2005	4	6	8	2	11	16	57	29
11:35	28/06/2005	7	15	10	8	13	21	58	34
17:35	28/06/2005	7	14	10	6	12	24	50	33
23:35	28/06/2005	6	13	9	7	9	17	51	31
05:35	29/06/2005	6	15	14	7	18	11	50	41
11:35	29/06/2005	6	11	11	8	18	18	53	34
17:35	29/06/2005	7	16	13	10	17	22	61	41
23:35	29/06/2005	13	12	16	4	18	19	54	35
05:35	30/06/2005	12	13	10	11	13	18	42	24
11:35	30/06/2005	10	15	11	9	15	20	63	39
17:35	30/06/2005	11	17	15	11	19	25	74	46
23:35	30/06/2005	10	15	12	10	16	20	61	40
05:35	01/07/2005	8	12	8	6	12	10	41	29
11:35	01/07/2005	14	17	10	8	15	20	62	38
17:35	01/07/2005	14	19	14	10	19	23	64	45
23:35	01/07/2005	6	16	10	7	13	8	68	37
05:35	02/07/2005	11	15	13	5	11	13	47	30
11:35	02/07/2005	18	24	15	9	16	21	63	45
17:35	02/07/2005	10	20	15	10	17	14	62	42
23:35	02/07/2005	5	9	10	6	14	16	64	33
05:35	03/07/2005	4	8	9	7	18	15	51	32
11:35	03/07/2005	4	9	9	8	15	15	53	35
17:35	03/07/2005	6	13	12	11	19	23	64	45
23:35	03/07/2005	4	9	10	8	15	18	55	36
05:35	04/07/2005	4	8	8	7	13	17	52	35
11:35	04/07/2005	6	10	10	9	15	18	61	39
17:35	04/07/2005	6	13	12	9	17	21	60	40
23:35	04/07/2005	5	10	11	7	16	12	57	39
05:35	05/07/2005	5	9	9	7	14	15	50	35
11:35	05/07/2005	7	14	12	9	18	21	62	44
17:35	05/07/2005	7	15	13	10	19	24	69	44
23:35	05/07/2005	6	13	11	7	17	27	58	39
05:35	06/07/2005	4	17	9	7	14	15	52	33
11:35	06/07/2005	7	13	12	9	17	20	62	41
17:35	06/07/2005	7	12	12	9	16	19	61	40
23:35	06/07/2005	5	6	9	7	14	15	50	35
05:35	07/07/2005	4	8	8	6	13	20	40	24
11:35	07/07/2005	6	11	10	7	15	16	55	37
17:35	07/07/2005	8	13	13	9	18	20	61	43
23:35	07/07/2005	6	12	9	8	22	24	49	35
05:35	08/07/2005	6	10	9	4	14	9	40	33
11:35	08/07/2005	7	13	11	9	17	17	57	39
17:35	08/07/2005	8	15	14	9	20	21	64	42
23:35	08/07/2005	6	13	12	8	16	12	58	36
05:35	09/07/2005	6	13	9	7	20	21	48	33
11:35	09/07/2005	8	12	10	7	16	15	48	24
17:35	09/07/2005	11	18	14	9	18	19	58	38
23:35	09/07/2005	11	15	12	9	16	6	55	37
05:35	10/07/2005	12	17	12	13	15	13	46	39
11:35	10/07/2005	13	17	12	9	15	15	54	39
17:35	10/07/2005	13	19	16	11	18	18	58	40
23:35	10/07/2005	14	18	14	11	16	15	60	23
05:35	11/07/2005	14	16	12	8	16	12	46	23
11:35	11/07/2005	19	25	17	13	20	18	57	38
17:35	11/07/2005	19	25	21	15	22	22	62	42
23:35	11/07/2005	18	20	17	9	23	10	63	26
05:35	12/07/2005	18	13	14	9	15	11	43	37
11:35	12/07/2005	24	29	21	15	20	17	59	38
17:35	12/07/2005	19	28	24	16	22	20	63	41
23:35	12/07/2005	23	25	21	14	20	24	54	37
05:35	13/07/2005	30	23	18	12	12	13	45	31
11:35	13/07/2005	26	30	25	16	21	17	57	38
17:35	13/07/2005	24	28	25	15	20	16	57	38

## MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	13/07/2005	15	25	21	13	18	15	52	33
05:35	14/07/2005	25	24	20	19	17	9	57	31
11:35	14/07/2005	31	31	25	15	18	15	54	34
17:35	14/07/2005	25	32	29	17	22	17	59	38
23:35	14/07/2005	29	30	26	16	21	15	53	36
05:35	15/07/2005	29	36	32	16	19	7	45	31
11:35	15/07/2005	36	36	33	19	21	18	56	38
17:35	15/07/2005	31	39	34	18	23	16	60	40
23:35	15/07/2005	33	33	31	17	20	14	50	34
05:35	16/07/2005	34	25	30	11	26	14	47	30
11:35	16/07/2005	41	39	34	19	21	14	51	34
17:35	16/07/2005	39	39	37	20	22	15	54	35
23:35	16/07/2005	37	48	35	26	22	10	58	32
05:35	17/07/2005	40	37	33	18	21	7	45	39
11:35	17/07/2005	45	46	43	23	23	17	57	36
17:35	17/07/2005	40	47	46	26	26	16	59	38
23:35	17/07/2005	33	37	40	23	24	14	50	31
05:35	18/07/2005	18	35	38	21	22	12	46	31
11:35	18/07/2005	22	39	47	26	26	16	54	37
17:35	18/07/2005	4	18	41	25	22	18	50	31
23:35	18/07/2005	4	5	37	25	24	8	46	30
05:35	19/07/2005	4	7	30	23	23	13	45	24
11:35	19/07/2005	5	8	11	26	25	14	47	32
17:35	19/07/2005	5	10	10	28	28	14	53	34
23:35	19/07/2005	4	8	8	24	20	18	45	29
05:35	20/07/2005	3	7	8	27	25	12	45	29
11:35	20/07/2005	6	9	10	24	28	15	51	33
17:35	20/07/2005	5	10	10	24	28	17	52	35
23:35	20/07/2005	5	8	9	20	26	14	38	31
05:35	21/07/2005	4	7	8	17	18	13	44	29
11:35	21/07/2005	5	9	10	19	25	13	50	30
17:35	21/07/2005	5	10	12	19	26	15	50	37
23:35	21/07/2005	5	10	6	18	25	15	47	31
05:35	22/07/2005	4	13	11	17	28	19	57	39
11:35	22/07/2005	8	12	14	21	26	16	52	35
17:35	22/07/2005	7	13	15	20	28	17	56	37
23:35	22/07/2005	4	11	13	18	29	15	47	32
05:35	23/07/2005	5	11	13	17	23	18	55	39
11:35	23/07/2005	4	9	12	17	22	17	43	28
17:35	23/07/2005	5	8	11	17	21	12	44	30
23:35	23/07/2005	9	7	9	12	26	16	42	35
05:35	24/07/2005	4	7	13	7	13	17	34	28
11:35	24/07/2005	5	8	9	6	11	12	42	29
17:35	24/07/2005	5	13	10	7	11	14	46	31
23:35	24/07/2005	5	8	13	7	11	12	53	28
05:35	25/07/2005	3	6	8	5	19	12	41	28
11:35	25/07/2005	5	9	15	6	11	14	44	30
17:35	25/07/2005	4	9	5	7	7	14	45	30
23:35	25/07/2005	5	12	13	5	15	8	40	29
05:35	26/07/2005	4	3	7	6	10	11	32	35
11:35	26/07/2005	3	7	8	6	11	7	41	29
17:35	26/07/2005	5	9	10	12	13	16	39	30
23:35	26/07/2005	4	8	8	10	11	27	53	22
05:35	27/07/2005	3	5	7	4	8	4	37	19
11:35	27/07/2005	5	8	7	6	12	14	43	31
17:35	27/07/2005	6	11	11	8	14	17	48	34
23:35	27/07/2005	6	9	14	7	18	9	46	41
05:35	28/07/2005	4	4	8	6	11	9	40	28
11:35	28/07/2005	5	9	10	7	12	14	44	27
17:35	28/07/2005	5	8	9	6	12	21	45	26
23:35	28/07/2005	9	5	9	8	17	20	45	29
05:35	29/07/2005	5	8	8	5	10	13	48	26
11:35	29/07/2005	7	11	11	8	14	17	49	32
17:35	29/07/2005	7	12	11	8	14	21	52	31
23:35	29/07/2005	9	9	13	6	13	11	45	27
05:35	30/07/2005	4	8	7	10	12	20	50	27
11:35	30/07/2005	6	11	11	7	14	18	49	28
17:35	30/07/2005	8	12	11	9	17	21	57	30
23:35	30/07/2005	5	10	5	4	14	22	47	26
05:35	31/07/2005	6	10	14	6	13	10	43	25
11:35	31/07/2005	5	8	8	6	12	14	45	24
17:35	31/07/2005	8	12	12	10	18	20	54	31
23:35	31/07/2005	7	11	11	8	16	12	50	27
05:35	01/08/2005	6	9	9	6	14	15	43	25

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	01/08/2005	7	13	13	9	16	18	49	27
17:35	01/08/2005	13	18	20	13	22	23	65	37
23:35	01/08/2005	6	11	15	8	18	17	49	26
05:35	02/08/2005	5	10	13	8	17	14	53	24
11:35	02/08/2005	8	12	15	10	17	16	49	26
17:35	02/08/2005	7	10	13	9	18	15	45	24
23:35	02/08/2005	7	10	14	16	13	15	52	24
05:35	03/08/2005	7	6	13	12	18	13	44	23
11:35	03/08/2005	9	10	14	13	21	16	46	23
17:35	03/08/2005	14	13	17	16	22	15	51	28
23:35	03/08/2005	12	12	17	15	22	14	52	24
05:35	04/08/2005	6	10	15	14	20	8	49	22
11:35	04/08/2005	19	18	23	20	25	20	53	28
17:35	04/08/2005	27	24	28	25	27	21	56	32
23:35	04/08/2005	24	22	27	22	25	18	47	29
05:35	05/08/2005	21	18	31	19	22	14	54	25
11:35	05/08/2005	30	25	28	23	26	18	51	27
17:35	05/08/2005	35	30	34	26	29	20	51	29
23:35	05/08/2005	33	28	34	18	27	22	57	26
05:35	06/08/2005	32	26	30	24	18	26	43	23
11:35	06/08/2005	42	37	41	31	30	19	52	31
17:35	06/08/2005	38	39	45	32	30	20	52	28
23:35	06/08/2005	41	37	44	32	29	12	48	27
05:35	07/08/2005	43	36	40	22	28	15	54	25
11:35	07/08/2005	43	37	40	31	28	16	46	25
17:35	07/08/2005	45	43	46	26	31	17	48	27
23:35	07/08/2005	45	29	41	33	29	16	37	24
05:35	08/08/2005	43	36	37	30	27	19	39	22
11:35	08/08/2005	52	47	48	35	31	17	45	25
17:35	08/08/2005	47	49	68	37	33	18	45	27
23:35	08/08/2005	45	42	58	36	31	20	33	24
05:35	09/08/2005	48	54	45	33	38	10	38	16
11:35	09/08/2005	52	53	51	29	32	16	45	24
17:35	09/08/2005	53	55	54	40	35	16	53	26
23:35	09/08/2005	51	50	65	38	25	30	42	32
05:35	10/08/2005	51	48	46	37	40	14	40	23
11:35	10/08/2005	64	60	64	47	39	20	46	27
17:35	10/08/2005	55	63	63	47	39	19	49	27
23:35	10/08/2005	54	50	56	42	44	16	35	33
05:35	11/08/2005	59	66	66	41	36	22	43	24
11:35	11/08/2005	61	59	52	42	37	17	42	24
17:35	11/08/2005	64	65	60	38	41	17	37	25
23:35	11/08/2005	60	56	55	44	29	16	35	17
05:35	12/08/2005	57	57	66	49	31	20	32	38
11:35	12/08/2005	72	70	67	48	36	14	45	26
17:35	12/08/2005	62	61	65	48	42	17	45	25
23:35	12/08/2005	58	59	46	45	42	23	41	23
05:35	13/08/2005	61	61	56	35	52	16	41	32
11:35	13/08/2005	67	69	71	61	47	13	44	26
17:35	13/08/2005	62	65	66	49	46	18	46	27
23:35	13/08/2005	46	47	63	48	47	12	43	33
05:35	14/08/2005	47	59	57	46	44	23	41	32
11:35	14/08/2005	57	57	59	49	44	17	42	24
17:35	14/08/2005	57	63	52	50	48	13	43	28
23:35	14/08/2005	53	54	73	46	46	29	47	23
05:35	15/08/2005	52	51	69	45	53	20	36	21
11:35	15/08/2005	59	65	68	48	47	18	41	24
17:35	15/08/2005	75	63	71	54	65	12	44	25
23:35	15/08/2005	56	60	66	61	61	18	50	27
05:35	16/08/2005	41	56	59	56	38	17	38	23
11:35	16/08/2005	58	60	48	51	49	17	41	24
17:35	16/08/2005	70	56	66	51	52	26	42	34
23:35	16/08/2005	57	44	65	42	40	18	42	33
05:35	17/08/2005	56	56	62	48	49	33	40	38
11:35	17/08/2005	53	55	58	37	60	17	48	23
17:35	17/08/2005	47	59	63	49	53	19	42	25
23:35	17/08/2005	3	45	62	48	42	17	41	24
05:35	18/08/2005	5	8	49	40	51	18	41	25
11:35	18/08/2005	5	12	59	48	49	19	41	25
17:35	18/08/2005	5	17	65	49	64	19	42	25
23:35	18/08/2005	5	10	43	48	52	18	49	25
05:35	19/08/2005	4	10	34	48	52	26	41	24
11:35	19/08/2005	5	11	31	50	53	26	34	25
17:35	19/08/2005	6	11	26	50	55	13	44	26

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	19/08/2005	6	7	30	48	61	25	49	33
05:35	20/08/2005	9	10	19	53	46	12	48	25
11:35	20/08/2005	6	11	21	49	54	19	45	27
17:35	20/08/2005	8	14	23	52	61	23	45	29
23:35	20/08/2005	10	11	16	38	56	15	45	27
05:35	21/08/2005	5	11	28	36	64	26	42	26
11:35	21/08/2005	5	11	20	45	52	20	45	27
17:35	21/08/2005	9	16	26	53	62	29	56	33
23:35	21/08/2005	6	11	15	42	51	21	47	20
05:35	22/08/2005	6	10	21	41	49	15	43	25
11:35	22/08/2005	5	10	15	41	50	19	44	27
17:35	22/08/2005	6	11	14	45	54	25	50	34
23:35	22/08/2005	5	10	12	39	47	35	45	28
05:35	23/08/2005	5	8	10	42	43	19	51	43
11:35	23/08/2005	7	10	13	40	49	22	45	30
17:35	23/08/2005	5	10	14	37	47	14	49	29
23:35	23/08/2005	2	9	7	42	43	18	36	35
05:35	24/08/2005	5	9	7	40	40	13	52	33
11:35	24/08/2005	4	9	13	34	42	21	43	26
17:35	24/08/2005	8	12	16	38	49	23	51	33
23:35	24/08/2005	5	9	13	34	40	25	53	27
05:35	25/08/2005	4	9	11	28	47	17	40	32
11:35	25/08/2005	7	12	15	34	43	20	44	26
17:35	25/08/2005	8	14	18	38	48	25	53	33
23:35	25/08/2005	7	12	18	28	44	22	38	29
05:35	26/08/2005	5	10	9	30	38	18	40	26
11:35	26/08/2005	8	13	17	32	40	22	46	27
17:35	26/08/2005	20	18	24	41	50	28	59	38
23:35	26/08/2005	12	11	21	35	42	24	51	21
05:35	27/08/2005	17	15	26	33	45	19	43	45
11:35	27/08/2005	22	19	23	36	44	22	49	31
17:35	27/08/2005	33	31	30	45	49	25	58	38
23:35	27/08/2005	27	22	26	46	41	28	47	36
05:35	28/08/2005	28	20	33	33	31	19	41	27
11:35	28/08/2005	33	29	31	39	41	23	51	31
17:35	28/08/2005	45	41	44	47	51	29	62	40
23:35	28/08/2005	42	37	41	41	45	24	52	34
05:35	29/08/2005	39	42	35	40	41	13	37	39
11:35	29/08/2005	42	36	37	41	39	26	37	28
17:35	29/08/2005	41	34	29	36	48	11	51	28
23:35	29/08/2005	33	46	45	29	37	11	38	26
05:35	30/08/2005	2	24	37	35	45	16	40	26
11:35	30/08/2005	10	12	39	38	46	24	39	27
17:35	30/08/2005	3	13	31	33	32	14	52	36
23:35	30/08/2005	6	17	27	49	49	12	60	26
05:35	31/08/2005	5	12	33	48	40	11	48	25
11:35	31/08/2005	6	13	32	35	41	19	43	27
17:35	31/08/2005	8	24	36	57	49	23	59	41
23:35	31/08/2005	5	7	36	40	43	17	47	20
05:35	01/09/2005	2	15	25	38	40	12	39	19
11:35	01/09/2005	5	11	23	42	45	18	42	27
17:35	01/09/2005	4	13	28	36	61	23	48	31
23:35	01/09/2005	5	16	21	39	34	17	49	22
05:35	02/09/2005	5	10	18	30	49	11	39	18
11:35	02/09/2005	6	11	19	37	34	17	41	28
17:35	02/09/2005	6	12	23	42	47	22	44	31
23:35	02/09/2005	5	16	34	37	41	26	51	36
05:35	03/09/2005	5	17	18	35	41	13	41	27
11:35	03/09/2005	7	12	21	39	35	18	46	27
17:35	03/09/2005	7	15	25	42	49	31	46	34
23:35	03/09/2005	6	18	28	35	50	26	44	22
05:35	04/09/2005	5	11	18	25	38	18	48	27
11:35	04/09/2005	8	13	20	28	44	18	45	28
17:35	04/09/2005	7	16	22	40	44	21	44	30
23:35	04/09/2005	14	21	21	34	50	19	42	29
05:35	05/09/2005	7	13	33	24	39	11	46	26
11:35	05/09/2005	11	16	22	38	42	20	42	29
17:35	05/09/2005	16	17	20	38	45	22	47	32
23:35	05/09/2005	10	16	17	35	42	20	54	23
05:35	06/09/2005	8	10	21	32	37	23	39	27
11:35	06/09/2005	18	20	25	34	43	20	44	28
17:35	06/09/2005	27	29	35	45	51	29	53	36
23:35	06/09/2005	19	20	27	34	40	13	42	30
05:35	07/09/2005	12	19	31	41	32	17	48	35



MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	07/09/2005	26	24	28	38	42	22	41	29
17:35	07/09/2005	31	32	35	42	40	25	51	33
23:35	07/09/2005	39	34	30	38	34	21	37	31
05:35	08/09/2005	28	27	30	36	39	19	43	28
11:35	08/09/2005	32	20	29	37	41	18	46	28
17:35	08/09/2005	40	38	40	45	48	26	66	37
23:35	08/09/2005	30	30	32	45	47	19	60	29
05:35	09/09/2005	29	20	30	33	36	8	48	19
11:35	09/09/2005	37	35	36	38	41	20	46	31
17:35	09/09/2005	39	38	40	39	44	23	48	33
23:35	09/09/2005	35	44	43	45	31	13	44	37
05:35	10/09/2005	26	35	34	30	38	13	42	28
11:35	10/09/2005	40	34	28	47	41	20	42	28
17:35	10/09/2005	44	42	43	32	54	20	46	40
23:35	10/09/2005	55	38	38	38	48	12	41	21
05:35	11/09/2005	31	35	27	37	48	19	40	27
11:35	11/09/2005	48	35	45	33	36	15	47	25
17:35	11/09/2005	46	46	45	42	45	16	39	32
23:35	11/09/2005	39	36	47	35	39	18	56	20
05:35	12/09/2005	44	52	51	29	40	34	39	20
11:35	12/09/2005	46	45	42	39	41	27	42	37
17:35	12/09/2005	35	43	34	46	51	9	34	28
23:35	12/09/2005	47	35	40	40	33	12	40	27
05:35	13/09/2005	36	42	38	37	47	16	38	26
11:35	13/09/2005	50	44	42	37	41	35	40	20
17:35	13/09/2005	36	49	49	51	44	21	51	21
23:35	13/09/2005	56	58	44	30	59	13	58	43
05:35	14/09/2005	49	44	54	55	39	24	38	35
11:35	14/09/2005	35	57	32	37	39	22	36	33
17:35	14/09/2005	51	52	49	41	44	15	41	30
23:35	14/09/2005	40	50	59	57	43	12	39	36
05:35	15/09/2005	37	35	54	43	57	17	43	25
11:35	15/09/2005	55	52	46	40	43	18	41	28
17:35	15/09/2005	52	57	54	53	39	29	43	31
23:35	15/09/2005	50	50	57	47	43	18	45	20
05:35	16/09/2005	38	52	46	39	41	20	37	34
11:35	16/09/2005	55	57	54	42	44	20	35	28
17:35	16/09/2005	42	58	56	63	48	22	35	31
23:35	16/09/2005	54	55	63	43	37	14	52	49
05:35	17/09/2005	54	53	46	39	41	29	47	28
11:35	17/09/2005	55	53	49	40	44	29	42	30
17:35	17/09/2005	55	68	65	50	57	36	49	34
23:35	17/09/2005	39	55	51	42	45	24	43	22
05:35	18/09/2005	54	44	49	51	47	21	42	30
11:35	18/09/2005	60	60	58	44	47	32	47	32
17:35	18/09/2005	57	68	61	52	53	29	50	35
23:35	18/09/2005	54	59	39	33	39	26	42	31
05:35	19/09/2005	66	74	60	41	56	29	41	29
11:35	19/09/2005	57	59	50	41	44	27	42	31
17:35	19/09/2005	69	60	41	43	47	22	46	30
23:35	19/09/2005	66	53	49	49	42	9	41	22
05:35	20/09/2005	46	77	52	41	43	21	42	37
11:35	20/09/2005	58	61	54	41	45	22	35	29
17:35	20/09/2005	57	59	55	52	48	16	46	32
23:35	20/09/2005	70	71	50	41	68	14	48	37
05:35	21/09/2005	56	56	63	37	42	26	42	28
11:35	21/09/2005	45	58	50	39	42	14	40	28
17:35	21/09/2005	61	63	59	44	49	25	37	31
23:35	21/09/2005	58	57	54	49	56	30	52	29
05:35	22/09/2005	54	55	47	39	43	20	40	20
11:35	22/09/2005	55	46	48	40	41	15	46	27
17:35	22/09/2005	58	82	59	45	62	32	46	33
23:35	22/09/2005	52	67	50	39	43	21	39	46
05:35	23/09/2005	52	53	38	38	33	19	36	20
11:35	23/09/2005	61	62	65	40	46	21	40	29
17:35	23/09/2005	59	61	70	41	47	23	44	30
23:35	23/09/2005	59	73	51	51	43	29	40	46
05:35	24/09/2005	56	58	65	48	35	21	40	28
11:35	24/09/2005	61	64	57	34	48	24	44	30
17:35	24/09/2005	57	66	58	54	47	12	44	31
23:35	24/09/2005	55	61	70	63	47	32	35	30
05:35	25/09/2005	57	62	53	40	56	22	51	30
11:35	25/09/2005	54	61	55	42	44	21	41	28
17:35	25/09/2005	66	72	58	46	52	21	48	35

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	25/09/2005	57	58	53	42	56	29	41	29
05:35	26/09/2005	53	56	51	44	42	19	48	36
11:35	26/09/2005	64	65	56	52	46	17	44	29
17:35	26/09/2005	47	64	60	45	49	35	37	30
23:35	26/09/2005	55	46	51	50	45	31	41	21
05:35	27/09/2005	52	53	50	46	35	21	44	20
11:35	27/09/2005	58	76	52	40	45	29	38	34
17:35	27/09/2005	62	70	50	55	51	20	46	29
23:35	27/09/2005	73	88	53	52	54	22	48	20
05:35	28/09/2005	52	69	62	36	41	19	36	25
11:35	28/09/2005	57	47	67	39	54	20	47	18
17:35	28/09/2005	67	71	59	44	47	18	54	31
23:35	28/09/2005	80	90	60	55	60	19	35	39
05:35	29/09/2005	65	83	59	36	61	25	52	22
11:35	29/09/2005	67	73	64	49	53	26	44	23
17:35	29/09/2005	64	74	72	51	69	31	48	33
23:35	29/09/2005	74	48	67	54	40	24	48	29
05:35	30/09/2005	59	63	55	42	39	34	48	29
11:35	30/09/2005	60	48	69	32	37	15	46	35
17:35	30/09/2005	64	68	61	46	52	26	53	23
23:35	30/09/2005	55	72	65	48	53	21	31	26
05:35	01/10/2005	58	57	66	45	42	15	43	20
11:35	01/10/2005	48	63	51	50	45	21	38	19
17:35	01/10/2005	78	69	59	44	48	30	50	37
23:35	01/10/2005	64	61	58	42	57	40	38	26
05:35	02/10/2005	61	62	56	32	55	22	38	20
11:35	02/10/2005	45	46	53	50	44	30	36	42
17:35	02/10/2005	61	70	76	36	62	29	39	27
23:35	02/10/2005	47	80	44	51	46	17	45	27
05:35	03/10/2005	72	60	41	38	43	27	35	24
11:35	03/10/2005	77	83	56	40	37	29	36	26
17:35	03/10/2005	71	59	65	49	55	36	35	30
23:35	03/10/2005	93	63	57	43	48	17	46	26
05:35	04/10/2005	60	80	44	49	38	22	36	41
11:35	04/10/2005	67	72	44	34	48	17	37	33
17:35	04/10/2005	66	76	71	41	56	30	44	30
23:35	04/10/2005	65	70	62	56	53	34	50	21
05:35	05/10/2005	49	68	58	43	60	32	56	20
11:35	05/10/2005	68	90	50	47	51	20	33	27
17:35	05/10/2005	69	81	76	53	57	32	69	32
23:35	05/10/2005	52	72	61	47	51	35	33	29
05:35	06/10/2005	51	69	57	56	48	26	38	35
11:35	06/10/2005	65	73	60	45	64	28	40	28
17:35	06/10/2005	92	112	94	54	64	33	49	34
23:35	06/10/2005	83	68	49	47	54	29	42	37
05:35	07/10/2005	68	74	64	45	63	28	42	23
11:35	07/10/2005	66	57	60	43	60	27	49	21
17:35	07/10/2005	67	82	113	42	46	39	46	31
23:35	07/10/2005	67	93	63	58	67	48	42	41
05:35	08/10/2005	64	58	79	37	51	29	43	38
11:35	08/10/2005	64	87	45	46	54	30	43	31
17:35	08/10/2005	92	80	110	62	70	35	50	26
23:35	08/10/2005	77	81	56	43	39	27	56	27
05:35	09/10/2005	68	69	69	53	59	36	39	21
11:35	09/10/2005	66	71	59	44	51	28	40	28
17:35	09/10/2005	79	93	83	57	53	37	53	37
23:35	09/10/2005	68	72	51	56	54	29	51	24
05:35	10/10/2005	72	73	64	47	44	23	44	25
11:35	10/10/2005	77	80	51	48	55	30	46	24
17:35	10/10/2005	88	105	53	40	48	31	56	25
23:35	10/10/2005	73	83	88	59	55	33	48	42
05:35	11/10/2005	50	72	77	45	52	36	62	50
11:35	11/10/2005	71	71	62	43	50	28	44	30
17:35	11/10/2005	73	85	46	52	59	35	41	27
23:35	11/10/2005	64	87	74	54	74	36	41	21
05:35	12/10/2005	64	67	47	44	49	28	49	30
11:35	12/10/2005	68	73	77	54	41	31	42	22
17:35	12/10/2005	84	86	77	54	59	36	50	34
23:35	12/10/2005	67	71	50	68	52	30	45	40
05:35	13/10/2005	71	54	78	46	66	40	43	23
11:35	13/10/2005	65	68	58	43	38	28	40	35
17:35	13/10/2005	99	66	97	53	62	35	52	36
23:35	13/10/2005	68	69	61	57	65	23	43	39
05:35	14/10/2005	77	106	53	44	46	27	31	28

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	14/10/2005	69	70	61	45	48	29	41	38
17:35	14/10/2005	62	87	60	46	100	37	53	37
23:35	14/10/2005	69	70	77	47	63	30	49	29
05:35	15/10/2005	70	70	48	55	61	39	50	30
11:35	15/10/2005	72	76	67	47	50	30	43	30
17:35	15/10/2005	75	105	74	48	71	30	46	32
23:35	15/10/2005	59	77	67	48	54	24	38	33
05:35	16/10/2005	68	60	49	55	64	21	40	30
11:35	16/10/2005	85	71	60	45	51	29	50	22
17:35	16/10/2005	91	61	82	60	56	32	43	31
23:35	16/10/2005	51	67	59	42	38	34	46	26
05:35	17/10/2005	68	68	74	42	57	28	39	36
11:35	17/10/2005	69	71	59	53	47	45	38	28
17:35	17/10/2005	55	73	80	45	63	28	40	23
23:35	17/10/2005	65	54	60	53	50	34	39	34
05:35	18/10/2005	65	88	44	41	57	43	45	45
11:35	18/10/2005	71	73	58	54	48	27	37	34
17:35	18/10/2005	76	79	86	50	57	32	45	42
23:35	18/10/2005	73	92	65	48	67	22	50	38
05:35	19/10/2005	65	110	60	45	40	27	47	28
11:35	19/10/2005	52	70	59	36	51	27	32	26
17:35	19/10/2005	76	107	54	50	58	32	44	40
23:35	19/10/2005	72	129	54	59	56	32	49	40
05:35	20/10/2005	70	94	63	57	65	32	50	22
11:35	20/10/2005	73	96	49	48	53	29	34	29
17:35	20/10/2005	76	83	87	41	57	31	51	31
23:35	20/10/2005	55	89	46	65	51	35	45	27
05:35	21/10/2005	69	89	58	51	50	36	46	36
11:35	21/10/2005	55	74	78	45	49	28	38	26
17:35	21/10/2005	81	118	57	52	74	35	55	44
23:35	21/10/2005	69	71	63	45	50	28	39	36
05:35	22/10/2005	69	71	60	54	61	27	46	34
11:35	22/10/2005	54	89	46	36	50	36	37	20
17:35	22/10/2005	66	113	91	42	71	35	43	32
23:35	22/10/2005	74	65	70	60	69	43	29	30
05:35	23/10/2005	75	99	66	39	56	39	48	21
11:35	23/10/2005	74	77	53	59	55	50	42	29
17:35	23/10/2005	81	92	95	68	63	33	39	32
23:35	23/10/2005	74	86	53	61	70	33	43	25
05:35	24/10/2005	95	105	83	40	60	41	51	24
11:35	24/10/2005	73	79	69	49	55	35	52	31
17:35	24/10/2005	82	125	82	58	67	40	50	38
23:35	24/10/2005	60	83	69	53	57	34	50	31
05:35	25/10/2005	75	79	65	38	68	35	42	37
11:35	25/10/2005	72	61	66	47	67	29	42	30
17:35	25/10/2005	92	110	85	61	71	43	65	39
23:35	25/10/2005	78	87	118	55	81	40	48	27
05:35	26/10/2005	72	103	85	69	47	36	44	43
11:35	26/10/2005	79	84	87	61	57	35	43	23
17:35	26/10/2005	78	112	73	44	65	29	50	47
23:35	26/10/2005	90	127	66	60	47	45	44	34
05:35	27/10/2005	71	77	50	58	54	25	51	32
11:35	27/10/2005	74	95	63	37	42	33	49	30
17:35	27/10/2005	79	92	80	57	67	49	41	38
23:35	27/10/2005	68	73	80	45	53	40	40	24
05:35	28/10/2005	69	75	58	44	50	29	48	27
11:35	28/10/2005	73	75	61	45	64	41	39	28
17:35	28/10/2005	99	115	93	51	73	51	46	35
23:35	28/10/2005	73	79	53	48	55	44	42	31
05:35	29/10/2005	71	78	63	46	50	31	47	29
11:35	29/10/2005	90	79	103	45	42	41	39	22
17:35	29/10/2005	85	92	61	64	63	52	57	44
23:35	29/10/2005	60	100	67	58	55	33	48	30
05:35	30/10/2005	76	77	63	47	52	32	41	32
11:35	30/10/2005	76	66	107	49	56	36	36	32
17:35	30/10/2005	106	92	80	55	65	41	56	47
23:35	30/10/2005	76	95	51	38	53	33	41	22
05:35	31/10/2005	58	78	62	46	52	31	40	31
11:35	31/10/2005	71	78	76	45	51	24	32	29
17:35	31/10/2005	101	89	71	50	60	36	42	33
23:35	31/10/2005	74	72	61	39	54	51	58	28
05:35	01/11/2005	79	99	66	46	44	33	40	38
11:35	01/11/2005	76	81	65	48	36	42	47	38
17:35	01/11/2005	60	104	67	40	68	35	41	39

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	01/11/2005	60	102	66	46	66	53	49	29
05:35	02/11/2005	93	62	82	47	52	34	49	38
11:35	02/11/2005	75	65	51	47	56	32	48	21
17:35	02/11/2005	100	68	75	53	74	37	42	24
23:35	02/11/2005	94	107	55	42	46	47	51	51
05:35	03/11/2005	90	103	67	57	68	42	49	38
11:35	03/11/2005	63	81	53	49	53	37	48	38
17:35	03/11/2005	77	102	54	49	71	44	41	39
23:35	03/11/2005	76	65	84	48	47	35	52	31
05:35	04/11/2005	82	85	84	49	70	27	50	30
11:35	04/11/2005	60	68	67	41	57	47	41	30
17:35	04/11/2005	79	82	67	62	55	28	51	42
23:35	04/11/2005	76	105	70	60	86	37	50	30
05:35	05/11/2005	60	81	53	40	45	37	50	32
11:35	05/11/2005	74	101	52	38	70	35	49	39
17:35	05/11/2005	97	82	50	57	46	36	41	24
23:35	05/11/2005	58	81	81	49	56	36	41	39
05:35	06/11/2005	75	81	100	40	67	46	34	49
11:35	06/11/2005	74	101	67	57	80	44	49	30
17:35	06/11/2005	79	85	85	59	58	37	42	23
23:35	06/11/2005	72	79	49	54	43	34	39	30
05:35	07/11/2005	74	100	61	47	51	33	37	29
11:35	07/11/2005	74	101	52	47	53	55	32	37
17:35	07/11/2005	63	134	64	59	67	37	42	32
23:35	07/11/2005	82	86	105	47	86	58	49	32
05:35	08/11/2005	98	98	64	47	44	45	33	40
11:35	08/11/2005	78	63	67	49	45	47	51	28
17:35	08/11/2005	77	86	72	50	69	47	42	40
23:35	08/11/2005	96	62	82	56	67	44	41	23
05:35	09/11/2005	54	75	47	45	64	30	31	44
11:35	09/11/2005	96	62	66	40	44	46	34	39
17:35	09/11/2005	65	111	54	60	60	28	50	39
23:35	09/11/2005	79	137	55	60	59	37	34	32
05:35	10/11/2005	81	104	69	49	90	36	40	29
11:35	10/11/2005	87	84	67	60	68	40	42	39
17:35	10/11/2005	95	140	66	48	81	45	60	47
23:35	10/11/2005	109	81	64	55	82	52	47	44
05:35	11/11/2005	102	91	69	73	58	40	41	33
11:35	11/11/2005	79	85	66	47	54	44	40	38
17:35	11/11/2005	79	70	58	54	52	32	45	43
23:35	11/11/2005	72	75	66	57	64	44	33	37
05:35	12/11/2005	89	72	60	53	60	25	43	28
11:35	12/11/2005	67	70	48	53	48	42	35	34
17:35	12/11/2005	93	78	62	46	67	35	47	37
23:35	12/11/2005	72	57	60	44	49	41	36	26
05:35	13/11/2005	71	56	59	53	59	33	36	27
11:35	13/11/2005	82	77	60	52	51	32	43	34
17:35	13/11/2005	102	75	62	46	52	34	44	28
23:35	13/11/2005	87	97	49	53	52	45	38	29
05:35	14/11/2005	80	80	62	46	52	36	46	28
11:35	14/11/2005	95	93	63	44	61	41	45	27
17:35	14/11/2005	100	96	62	55	49	32	38	29
23:35	14/11/2005	101	68	53	39	43	30	33	24
05:35	15/11/2005	74	66	52	38	41	26	32	23
11:35	15/11/2005	0	67	51	36	42	27	31	23
17:35	15/11/2005	0	74	58	42	47	30	34	25
23:35	15/11/2005	0	73	59	40	46	29	34	24
05:35	16/11/2005	2	79	59	39	48	31	34	25
11:35	16/11/2005	5	84	60	43	48	24	35	25
17:35	16/11/2005	0	118	67	46	54	34	39	28
23:35	16/11/2005	0	81	70	55	53	39	39	28
05:35	17/11/2005	0	102	67	44	63	34	38	29
11:35	17/11/2005	0	110	68	46	64	36	37	37
17:35	17/11/2005	0	220	63	61	61	54	48	30
23:35	17/11/2005	0	107	77	62	51	43	63	34
05:35	18/11/2005	0	196	72	64	65	73	54	35
11:35	18/11/2005	0	220	75	47	53	39	47	47
17:35	18/11/2005	0	236	69	65	78	55	45	42
23:35	18/11/2005	0	168	64	42	71	40	41	31
05:35	19/11/2005	0	102	83	60	48	42	34	32
11:35	19/11/2005	0	145	94	59	66	45	57	24
17:35	19/11/2005	0	165	107	63	75	42	59	39
23:35	19/11/2005	0	148	101	59	86	48	73	35
05:35	20/11/2005	0	136	93	46	64	34	47	42

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	20/11/2005	0	120	81	62	76	42	53	41
17:35	20/11/2005	0	117	91	67	82	59	35	43
23:35	20/11/2005	0	100	75	61	57	50	38	23
05:35	21/11/2005	0	108	95	44	58	41	41	31
11:35	21/11/2005	0	106	83	53	58	40	48	23
17:35	21/11/2005	0	135	83	54	61	52	50	41
23:35	21/11/2005	0	86	85	69	64	43	44	40
05:35	22/11/2005	2	108	68	44	75	73	45	54
11:35	22/11/2005	3	155	72	55	83	45	36	26
17:35	22/11/2005	3	128	121	74	59	67	48	58
23:35	22/11/2005	6	179	82	67	74	44	54	44
05:35	23/11/2005	6	98	82	56	60	34	50	42
11:35	23/11/2005	6	77	75	51	59	42	50	41
17:35	23/11/2005	6	116	71	60	68	40	40	40
23:35	23/11/2005	2	113	75	51	92	42	49	39
05:35	24/11/2005	3	116	73	61	68	32	40	31
11:35	24/11/2005	9	125	78	41	71	32	51	40
17:35	24/11/2005	11	125	80	64	77	53	49	42
23:35	24/11/2005	11	90	60	62	59	33	42	39
05:35	25/11/2005	6	54	68	60	46	50	40	30
11:35	25/11/2005	12	87	91	61	60	41	41	30
17:35	25/11/2005	4	84	75	40	46	51	49	31
23:35	25/11/2005	17	80	70	60	56	40	47	37
05:35	26/11/2005	9	78	71	47	57	39	47	29
11:35	26/11/2005	0	87	73	48	58	53	49	37
17:35	26/11/2005	0	111	59	60	73	50	41	31
23:35	26/11/2005	0	112	71	58	57	38	38	38
05:35	27/11/2005	0	89	71	45	69	38	45	30
11:35	27/11/2005	0	93	54	37	44	46	37	27
17:35	27/11/2005	0	106	81	61	58	54	49	40
23:35	27/11/2005	0	110	76	62	58	41	47	39
05:35	28/11/2005	0	122	79	41	56	51	40	32
11:35	28/11/2005	0	137	80	48	55	30	38	38
17:35	28/11/2005	0	135	83	58	56	38	38	38
23:35	28/11/2005	0	134	87	49	66	40	38	37
05:35	29/11/2005	0	0	94	48	45	50	37	29
11:35	29/11/2005	0	2	98	48	52	46	32	27
17:35	29/11/2005	0	6	92	49	56	38	37	31
23:35	29/11/2005	0	8	141	48	54	35	36	29
05:35	30/11/2005	0	22	108	49	52	37	37	28
11:35	30/11/2005	0	31	0	48	52	37	36	27
17:35	30/11/2005	0	36	0	48	54	37	36	29
23:35	30/11/2005	0	40	0	52	68	38	37	27
05:35	01/12/2005	0	37	0	52	56	47	37	29
11:35	01/12/2005	0	50	0	51	69	38	36	29
17:35	01/12/2005	0	54	0	53	56	37	44	29
23:35	01/12/2005	0	70	0	55	55	39	37	30
05:35	02/12/2005	0	62	0	69	59	40	37	28
11:35	02/12/2005	0	64	0	112	58	39	36	28
17:35	02/12/2005	0	85	0	0	58	36	37	28
23:35	02/12/2005	0	69	1	0	61	37	37	29
05:35	03/12/2005	0	69	0	0	62	39	35	30
11:35	03/12/2005	0	84	2	0	63	38	36	28
17:35	03/12/2005	0	66	2	0	66	39	35	28
23:35	03/12/2005	0	62	3	0	67	38	36	27
05:35	04/12/2005	0	63	3	0	68	36	37	30
11:35	04/12/2005	0	62	3	0	74	38	36	26
17:35	04/12/2005	0	66	4	0	83	38	35	28
23:35	04/12/2005	0	65	5	0	99	37	35	26
05:35	05/12/2005	0	65	6	0	114	34	33	26
11:35	05/12/2005	0	60	8	0	71	30	32	23
17:35	05/12/2005	0	62	13	0	20	34	33	27
23:35	05/12/2005	0	62	15	0	4	35	32	25
05:35	06/12/2005	0	57	17	0	3	32	30	23
11:35	06/12/2005	0	61	22	1	3	31	32	23
17:35	06/12/2005	0	63	30	5	4	34	34	26
23:35	06/12/2005	0	62	34	7	5	35	34	26
05:35	07/12/2005	0	64	36	11	7	34	32	25
11:35	07/12/2005	0	65	38	16	11	34	34	26
17:35	07/12/2005	0	75	61	28	19	42	48	38
23:35	07/12/2005	0	81	40	40	28	58	41	40
05:35	08/12/2005	0	82	66	35	37	47	39	31
11:35	08/12/2005	0	73	47	29	40	43	46	31
17:35	08/12/2005	0	74	48	40	47	46	39	30

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	08/12/2005	0	76	53	41	54	35	39	32
05:35	09/12/2005	0	120	56	59	56	52	38	46
11:35	09/12/2005	0	74	53	45	68	63	54	36
17:35	09/12/2005	0	34	55	38	73	65	47	43
23:35	09/12/2005	0	17	37	29	52	69	55	38
05:35	10/12/2005	0	10	14	27	33	62	51	41
11:35	10/12/2005	0	12	12	20	32	49	42	34
17:35	10/12/2005	0	6	16	19	30	53	45	45
23:35	10/12/2005	0	5	10	11	21	65	57	45
05:35	11/12/2005	0	4	11	13	23	66	46	37
11:35	11/12/2005	0	3	9	5	20	61	51	40
17:35	11/12/2005	0	4	9	5	16	67	43	34
23:35	11/12/2005	0	7	4	8	19	49	42	32
05:35	12/12/2005	0	17	8	6	13	51	50	33
11:35	12/12/2005	0	43	13	6	12	61	35	24
17:35	12/12/2005	0	60	15	2	15	54	44	35
23:35	12/12/2005	0	62	12	10	15	51	52	45
05:35	13/12/2005	0	60	14	8	24	52	45	44
11:35	13/12/2005	0	56	20	9	19	59	34	33
17:35	13/12/2005	0	62	14	10	20	50	42	42
23:35	13/12/2005	0	60	15	10	19	61	49	31
05:35	14/12/2005	0	59	17	22	20	60	34	32
11:35	14/12/2005	0	78	18	18	21	50	49	32
17:35	14/12/2005	0	72	18	12	21	45	39	30
23:35	14/12/2005	0	69	17	12	20	42	36	30
05:35	15/12/2005	0	82	18	13	20	41	35	29
11:35	15/12/2005	0	89	23	16	24	42	36	29
17:35	15/12/2005	0	91	26	18	27	45	37	28
23:35	15/12/2005	0	92	27	21	28	40	33	28
05:35	16/12/2005	0	96	31	23	30	41	33	27
11:35	16/12/2005	0	92	35	25	34	39	33	26
17:35	16/12/2005	0	102	41	34	42	39	35	27
23:35	16/12/2005	0	98	44	38	49	39	34	26
05:35	17/12/2005	0	96	43	40	55	38	33	27
11:35	17/12/2005	0	102	45	43	66	40	34	25
17:35	17/12/2005	0	111	49	48	82	43	36	29
23:35	17/12/2005	0	117	50	49	98	43	36	29
05:35	18/12/2005	0	116	49	50	115	41	37	29
11:35	18/12/2005	0	115	49	43	128	43	35	28
17:35	18/12/2005	0	129	56	58	159	50	39	33
23:35	18/12/2005	0	130	56	54	161	50	41	32
05:35	19/12/2005	0	121	52	57	155	54	39	31
11:35	19/12/2005	0	131	57	58	140	66	40	34
17:35	19/12/2005	0	136	59	61	266	28	52	34
23:35	19/12/2005	0	137	58	62	193	0	43	33
05:35	20/12/2005	0	122	54	58	156	0	39	31
11:35	20/12/2005	0	113	52	55	154	0	37	21
17:35	20/12/2005	0	119	63	57	161	1	39	31
23:35	20/12/2005	0	108	52	55	159	1	37	30
05:35	21/12/2005	0	127	56	57	175	3	39	31
11:35	21/12/2005	0	125	71	72	184	3	50	37
17:35	21/12/2005	0	207	84	67	330	10	57	44
23:35	21/12/2005	0	114	65	66	270	12	54	45
05:35	22/12/2005	0	143	77	64	208	8	36	45
11:35	22/12/2005	0	101	55	72	251	3	40	32
17:35	22/12/2005	0	134	74	59	259	13	42	35
23:35	22/12/2005	0	111	58	62	191	10	47	36
05:35	23/12/2005	0	132	58	64	263	10	53	26
11:35	23/12/2005	0	126	56	58	164	8	41	33
17:35	23/12/2005	0	103	56	72	226	9	35	42
23:35	23/12/2005	0	130	59	61	166	9	41	33
05:35	24/12/2005	0	119	51	56	169	13	50	33
11:35	24/12/2005	0	120	56	56	154	13	39	32
17:35	24/12/2005	0	135	76	76	184	10	35	34
23:35	24/12/2005	0	143	74	73	240	11	53	35
05:35	25/12/2005	0	143	60	73	187	12	43	36
11:35	25/12/2005	0	110	61	72	180	12	44	34
17:35	25/12/2005	0	143	78	50	180	13	48	29
23:35	25/12/2005	0	135	72	70	202	17	43	43
05:35	26/12/2005	0	137	58	74	213	12	55	46
11:35	26/12/2005	0	130	74	70	152	10	34	43
17:35	26/12/2005	0	136	75	60	187	11	43	45
23:35	26/12/2005	0	125	57	53	136	10	42	26
05:35	27/12/2005	0	99	66	55	131	11	49	43

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	27/12/2005	0	126	68	48	136	11	40	43
17:35	27/12/2005	0	136	58	59	143	11	42	35
23:35	27/12/2005	0	130	59	57	146	11	43	43
05:35	28/12/2005	0	132	75	60	196	13	44	36
11:35	28/12/2005	0	134	58	62	185	17	51	34
17:35	28/12/2005	0	171	76	58	147	12	45	45
23:35	28/12/2005	0	129	60	58	133	13	53	34
05:35	29/12/2005	0	125	55	57	125	17	42	43
11:35	29/12/2005	0	127	72	66	123	12	42	35
17:35	29/12/2005	0	131	57	67	113	11	44	45
23:35	29/12/2005	0	128	55	54	107	10	43	35
05:35	30/12/2005	0	123	54	53	103	14	44	33
11:35	30/12/2005	0	125	53	54	93	11	50	42
17:35	30/12/2005	0	123	66	52	119	9	51	44
23:35	30/12/2005	0	126	52	65	97	15	34	34
05:35	31/12/2005	0	128	70	55	127	10	42	43
11:35	31/12/2005	0	130	65	67	105	15	42	34
17:35	31/12/2005	0	108	58	55	102	11	53	35
23:35	31/12/2005	0	133	73	56	111	16	42	35
05:35	01/01/2006	0	129	58	55	105	11	42	34
11:35	01/01/2006	0	134	70	45	100	12	43	34
17:35	01/01/2006	0	124	57	63	121	17	43	36
23:35	01/01/2006	1	123	68	51	93	11	44	36
05:35	02/01/2006	0	120	84	51	88	12	45	44
11:35	02/01/2006	0	118	50	60	82	6	43	46
17:35	02/01/2006	0	115	50	48	80	6	44	46
23:35	02/01/2006	0	111	77	55	75	10	44	35
05:35	03/01/2006	0	115	46	43	68	14	36	38
11:35	03/01/2006	0	106	56	42	69	9	53	37
17:35	03/01/2006	0	114	42	31	63	8	52	35
23:35	03/01/2006	0	117	41	38	57	12	41	33
05:35	04/01/2006	0	122	57	39	62	10	39	34
11:35	04/01/2006	0	125	50	43	68	6	48	42
17:35	04/01/2006	0	123	50	47	92	6	40	34
23:35	04/01/2006	0	124	65	50	65	12	38	33
05:35	05/01/2006	0	126	56	44	91	9	35	33
11:35	05/01/2006	0	120	67	64	100	9	40	34
17:35	05/01/2006	0	135	54	66	108	11	41	34
23:35	05/01/2006	0	131	44	58	118	12	41	34
05:35	06/01/2006	0	136	71	69	120	9	41	35
11:35	06/01/2006	0	119	54	68	150	13	49	32
17:35	06/01/2006	0	121	52	55	120	13	40	34
23:35	06/01/2006	0	103	56	47	97	10	41	32
05:35	07/01/2006	0	121	68	55	116	16	41	32
11:35	07/01/2006	0	122	53	65	145	16	43	33
17:35	07/01/2006	0	126	72	55	121	16	50	34
23:35	07/01/2006	0	116	52	55	114	17	39	32
05:35	08/01/2006	0	111	62	53	112	16	40	32
11:35	08/01/2006	0	116	67	54	122	16	39	32
17:35	08/01/2006	0	131	56	48	173	27	42	34
23:35	08/01/2006	0	124	54	57	126	18	42	34
05:35	09/01/2006	0	117	52	56	133	18	40	32
11:35	09/01/2006	0	122	51	56	131	18	38	43
17:35	09/01/2006	0	122	56	56	139	18	39	33
23:35	09/01/2006	0	134	72	70	165	22	49	34
05:35	10/01/2006	0	124	54	58	147	22	41	33
11:35	10/01/2006	0	122	51	56	153	23	40	41
17:35	10/01/2006	0	127	44	61	166	23	42	33
23:35	10/01/2006	0	133	58	61	180	32	42	35
05:35	11/01/2006	0	135	54	60	166	27	43	33
11:35	11/01/2006	0	127	53	59	160	24	40	35
17:35	11/01/2006	0	124	60	72	167	27	41	37
23:35	11/01/2006	0	128	71	56	179	25	42	35
05:35	12/01/2006	0	128	55	58	156	25	40	33
11:35	12/01/2006	0	122	53	57	144	24	39	32
17:35	12/01/2006	0	111	53	56	143	25	39	31
23:35	12/01/2006	0	116	52	54	140	23	31	30
05:35	13/01/2006	0	120	48	57	136	24	38	31
11:35	13/01/2006	0	109	51	55	147	24	39	32
17:35	13/01/2006	0	114	68	57	146	26	39	32
23:35	13/01/2006	0	122	52	55	148	25	38	32
05:35	14/01/2006	0	122	54	70	158	35	41	34
11:35	14/01/2006	0	127	55	70	165	30	40	35
17:35	14/01/2006	0	132	69	72	220	29	50	35

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	14/01/2006	0	127	58	74	182	29	43	35
05:35	15/01/2006	0	126	53	57	164	30	41	34
11:35	15/01/2006	0	116	53	56	153	28	39	40
17:35	15/01/2006	0	115	52	56	154	27	40	41
23:35	15/01/2006	0	112	52	56	157	29	39	32
05:35	16/01/2006	0	118	53	58	210	30	39	33
11:35	16/01/2006	0	103	46	50	139	26	36	29
17:35	16/01/2006	0	120	54	54	159	31	41	32
23:35	16/01/2006	0	119	50	55	152	28	38	32
05:35	17/01/2006	0	122	53	57	166	32	40	33
11:35	17/01/2006	0	117	49	57	129	32	37	32
17:35	17/01/2006	0	125	55	59	166	33	40	31
23:35	17/01/2006	0	120	52	69	169	33	40	33
05:35	18/01/2006	0	124	55	59	176	35	40	33
11:35	18/01/2006	0	109	49	54	161	33	38	31
17:35	18/01/2006	0	115	49	57	163	34	37	30
23:35	18/01/2006	0	110	49	56	153	34	36	32
05:35	19/01/2006	0	107	48	52	139	33	36	29
11:35	19/01/2006	0	96	45	48	128	29	33	27
17:35	19/01/2006	0	99	49	54	144	35	36	29
23:35	19/01/2006	0	102	44	51	131	32	35	29
05:35	20/01/2006	0	90	40	49	120	31	33	27
11:35	20/01/2006	0	95	42	48	125	32	33	27
17:35	20/01/2006	0	99	45	49	138	33	36	27
23:35	20/01/2006	0	97	42	47	124	34	34	27
05:35	21/01/2006	0	97	44	51	135	37	34	28
11:35	21/01/2006	0	89	39	48	128	36	33	27
17:35	21/01/2006	0	111	50	57	158	44	37	30
23:35	21/01/2006	0	123	52	60	180	61	39	32
05:35	22/01/2006	0	127	69	60	243	64	32	41
11:35	22/01/2006	0	137	48	77	217	57	52	35
17:35	22/01/2006	0	154	68	60	337	66	46	49
23:35	22/01/2006	0	156	67	69	361	84	45	37
05:35	23/01/2006	0	179	72	92	284	68	46	36
11:35	23/01/2006	0	157	83	70	311	64	54	47
17:35	23/01/2006	0	145	79	69	226	81	45	39
23:35	23/01/2006	0	119	54	58	174	55	39	34
05:35	24/01/2006	0	101	47	51	148	48	36	31
11:35	24/01/2006	0	110	47	52	149	46	36	29
17:35	24/01/2006	0	118	50	56	165	48	44	31
23:35	24/01/2006	0	115	52	56	165	47	38	32
05:35	25/01/2006	0	108	49	55	154	47	37	32
11:35	25/01/2006	0	101	47	53	144	45	37	36
17:35	25/01/2006	0	128	56	63	198	59	42	37
23:35	25/01/2006	0	119	53	56	178	56	38	33
05:35	26/01/2006	0	109	49	54	162	50	39	30
11:35	26/01/2006	0	115	50	55	172	56	37	31
17:35	26/01/2006	0	112	49	56	155	53	38	32
23:35	26/01/2006	0	105	47	53	140	50	34	30
05:35	27/01/2006	0	96	46	51	138	51	33	29
11:35	27/01/2006	0	95	46	51	133	48	33	28
17:35	27/01/2006	0	100	48	54	149	56	34	29
23:35	27/01/2006	0	109	49	56	150	59	35	29
05:35	28/01/2006	0	112	48	53	155	56	37	30
11:35	28/01/2006	0	109	48	82	157	60	36	31
17:35	28/01/2006	0	119	54	60	178	69	39	34
23:35	28/01/2006	0	126	55	61	179	71	40	34
05:35	29/01/2006	0	123	53	62	168	73	39	31
11:35	29/01/2006	0	111	52	57	176	70	38	32
17:35	29/01/2006	0	125	72	62	192	76	40	34
23:35	29/01/2006	0	123	57	60	188	75	40	35
05:35	30/01/2006	0	113	51	59	158	70	39	32
11:35	30/01/2006	0	116	51	58	164	72	38	39
17:35	30/01/2006	0	122	55	57	172	73	39	33
23:35	30/01/2006	0	108	51	57	159	69	37	30
05:35	31/01/2006	0	101	45	52	146	63	35	29
11:35	31/01/2006	0	93	45	49	135	62	32	26
17:35	31/01/2006	0	111	51	57	168	74	38	31
23:35	31/01/2006	0	118	50	59	177	74	38	31
05:35	01/02/2006	0	127	58	60	188	79	40	34
11:35	01/02/2006	0	118	52	58	172	63	38	31
17:35	01/02/2006	0	138	61	65	215	95	40	37
23:35	01/02/2006	0	121	54	61	184	82	39	35
05:35	02/02/2006	0	124	67	61	183	84	41	33



MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	02/02/2006	0	117	65	60	172	80	37	32
17:35	02/02/2006	1	116	68	72	248	101	54	47
23:35	02/02/2006	0	139	59	66	219	98	47	36
05:35	03/02/2006	0	130	55	63	187	88	40	44
11:35	03/02/2006	0	121	52	58	185	105	39	32
17:35	03/02/2006	0	146	48	79	300	106	45	47
23:35	03/02/2006	0	150	79	79	242	100	53	39
05:35	04/02/2006	0	133	57	65	213	95	40	36
11:35	04/02/2006	0	123	66	63	251	88	42	33
17:35	04/02/2006	0	137	58	77	292	100	43	36
23:35	04/02/2006	0	137	62	54	294	100	42	46
05:35	05/02/2006	0	133	70	65	194	95	42	37
11:35	05/02/2006	0	132	58	74	200	112	42	35
17:35	05/02/2006	0	106	57	63	281	93	34	35
23:35	05/02/2006	0	123	56	63	187	89	40	33
05:35	06/02/2006	0	125	53	59	173	84	40	33
11:35	06/02/2006	0	111	51	55	161	77	38	31
17:35	06/02/2006	0	128	54	62	185	90	40	35
23:35	06/02/2006	0	113	52	59	170	82	40	40
05:35	07/02/2006	0	122	56	60	191	81	42	34
11:35	07/02/2006	0	117	51	59	176	85	39	33
17:35	07/02/2006	0	135	58	63	196	89	40	38
23:35	07/02/2006	0	137	73	65	201	93	41	35
05:35	08/02/2006	0	133	58	76	225	93	53	46
11:35	08/02/2006	0	136	59	66	169	115	43	38
17:35	08/02/2006	0	164	90	72	289	109	48	41
23:35	08/02/2006	0	152	82	82	232	102	47	42
05:35	09/02/2006	0	197	83	72	351	129	57	51
11:35	09/02/2006	0	140	59	66	160	95	37	38
17:35	09/02/2006	0	150	82	69	313	120	47	48
23:35	09/02/2006	0	129	59	64	193	86	44	38
05:35	10/02/2006	0	116	52	58	164	76	40	32
11:35	10/02/2006	0	106	52	58	164	76	31	30
17:35	10/02/2006	0	134	74	78	284	89	43	36
23:35	10/02/2006	0	129	60	63	206	83	43	37
05:35	11/02/2006	0	127	58	63	195	78	43	36
11:35	11/02/2006	0	99	55	63	193	79	49	43
17:35	11/02/2006	0	150	75	69	226	88	37	37
23:35	11/02/2006	0	150	77	68	224	93	46	50
05:35	12/02/2006	0	130	57	62	209	80	42	35
11:35	12/02/2006	0	143	80	78	306	109	56	47
17:35	12/02/2006	0	111	74	63	329	145	65	56
23:35	12/02/2006	0	141	73	62	283	89	44	48
05:35	13/02/2006	0	190	78	84	169	92	47	49
11:35	13/02/2006	0	158	66	60	349	124	39	54
17:35	13/02/2006	3	158	86	71	186	121	62	40
23:35	13/02/2006	0	108	55	60	182	77	39	36
05:35	14/02/2006	0	107	50	55	148	68	38	34
11:35	14/02/2006	0	98	46	52	135	60	36	30
17:35	14/02/2006	0	111	50	56	158	66	39	33
23:35	14/02/2006	0	104	47	53	142	60	36	31
05:35	15/02/2006	0	99	46	52	138	57	35	30
11:35	15/02/2006	0	104	47	52	144	61	35	29
17:35	15/02/2006	0	106	46	51	143	63	35	30
23:35	15/02/2006	0	93	44	50	130	57	34	28
05:35	16/02/2006	0	85	41	47	118	58	32	27
11:35	16/02/2006	0	79	35	44	110	53	28	22
17:35	16/02/2006	0	106	48	55	150	75	36	31
23:35	16/02/2006	0	102	45	54	146	73	34	28
05:35	17/02/2006	0	107	46	55	154	82	37	31
11:35	17/02/2006	0	107	49	55	161	78	36	31
17:35	17/02/2006	0	131	57	63	198	122	41	38
23:35	17/02/2006	0	125	52	62	175	92	39	34
05:35	18/02/2006	0	122	56	61	178	91	40	34
11:35	18/02/2006	0	122	54	62	180	93	39	34
17:35	18/02/2006	0	145	61	56	333	116	45	39
23:35	18/02/2006	0	117	77	67	223	133	44	37
05:35	19/02/2006	0	149	77	70	223	110	43	38
11:35	19/02/2006	0	139	66	67	317	112	43	37
17:35	19/02/2006	0	144	61	82	241	120	44	39
23:35	19/02/2006	0	114	51	58	172	94	39	33
05:35	20/02/2006	0	123	53	61	193	98	39	34
11:35	20/02/2006	0	119	66	58	175	93	37	34
17:35	20/02/2006	0	138	62	67	209	111	43	37

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	20/02/2006	0	135	56	66	277	107	44	37
05:35	21/02/2006	0	137	57	66	215	105	41	37
11:35	21/02/2006	0	128	53	58	250	97	48	34
17:35	21/02/2006	1	153	65	69	240	117	46	39
23:35	21/02/2006	0	115	52	63	174	95	40	34
05:35	22/02/2006	0	113	53	59	169	89	39	31
11:35	22/02/2006	0	112	50	58	174	88	37	32
17:35	22/02/2006	0	131	61	68	218	107	43	37
23:35	22/02/2006	0	121	54	62	177	99	39	34
05:35	23/02/2006	0	118	53	62	184	95	39	35
11:35	23/02/2006	0	117	56	59	176	91	39	32
17:35	23/02/2006	0	125	53	61	184	95	39	34
23:35	23/02/2006	0	112	49	56	167	90	38	33
05:35	24/02/2006	0	109	49	57	161	85	37	33
11:35	24/02/2006	0	103	49	56	162	88	36	31
17:35	24/02/2006	0	117	54	62	188	94	40	34
23:35	24/02/2006	0	112	51	60	166	92	37	34
05:35	25/02/2006	0	101	47	50	143	78	34	29
11:35	25/02/2006	0	104	47	54	147	83	35	29
17:35	25/02/2006	0	119	55	60	185	100	40	34
23:35	25/02/2006	0	115	47	56	159	87	38	32
05:35	26/02/2006	0	95	46	53	149	79	35	29
11:35	26/02/2006	0	89	42	52	139	80	34	28
17:35	26/02/2006	0	121	52	60	195	122	39	33
23:35	26/02/2006	0	115	50	57	169	86	36	32
05:35	27/02/2006	0	113	50	58	156	94	36	32
11:35	27/02/2006	0	116	46	58	167	92	36	30
17:35	27/02/2006	0	128	55	64	195	101	41	34
23:35	27/02/2006	0	123	54	64	186	102	40	33
05:35	28/02/2006	0	120	55	63	186	100	40	36
11:35	28/02/2006	0	120	55	60	176	95	46	33
17:35	28/02/2006	0	152	64	82	228	115	44	37
23:35	28/02/2006	0	119	52	63	184	99	39	34
05:35	01/03/2006	0	115	52	60	167	94	37	34
11:35	01/03/2006	0	118	53	57	179	97	38	31
17:35	01/03/2006	0	127	58	63	202	100	40	35
23:35	01/03/2006	0	129	53	62	183	102	40	34
05:35	02/03/2006	0	108	50	57	166	90	37	33
11:35	02/03/2006	0	103	45	55	152	83	35	29
17:35	02/03/2006	0	172	61	68	299	88	36	45
23:35	02/03/2006	0	126	53	65	192	95	41	34
05:35	03/03/2006	0	116	51	59	179	95	38	33
11:35	03/03/2006	0	116	50	59	170	95	37	30
17:35	03/03/2006	0	143	62	71	301	115	37	49
23:35	03/03/2006	0	133	57	78	200	111	41	36
05:35	04/03/2006	0	132	57	66	199	102	42	35
11:35	04/03/2006	0	125	56	66	200	108	42	35
17:35	04/03/2006	0	141	63	69	242	117	45	37
23:35	04/03/2006	0	130	57	67	201	106	43	36
05:35	05/03/2006	0	121	54	62	178	100	40	33
11:35	05/03/2006	0	122	69	64	194	106	41	34
17:35	05/03/2006	0	152	65	85	179	130	38	50
23:35	05/03/2006	0	141	56	56	215	114	42	37
05:35	06/03/2006	0	103	59	67	203	110	42	37
11:35	06/03/2006	0	129	73	68	210	140	43	36
17:35	06/03/2006	0	135	69	76	210	170	61	54
23:35	06/03/2006	0	140	61	67	231	117	45	39
05:35	07/03/2006	0	128	57	63	191	102	41	37
11:35	07/03/2006	0	171	53	91	198	116	54	38
17:35	07/03/2006	1	144	73	82	417	172	52	55
23:35	07/03/2006	0	157	54	74	271	151	46	39
05:35	08/03/2006	0	135	75	69	315	142	53	38
11:35	08/03/2006	0	161	51	76	383	160	46	39
17:35	08/03/2006	0	176	95	98	242	150	56	58
23:35	08/03/2006	0	171	88	66	447	138	62	54
05:35	09/03/2006	0	159	81	92	375	154	49	42
11:35	09/03/2006	0	157	66	86	255	153	47	48
17:35	09/03/2006	0	148	64	88	357	149	59	51
23:35	09/03/2006	0	149	66	72	343	116	38	51
05:35	10/03/2006	0	114	77	85	314	96	57	51
11:35	10/03/2006	0	132	57	67	211	113	45	38
17:35	10/03/2006	0	153	81	70	253	145	58	51
23:35	10/03/2006	0	134	78	80	288	108	44	47
05:35	11/03/2006	0	139	61	67	206	136	44	38

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	11/03/2006	0	131	75	79	277	103	34	36
17:35	11/03/2006	0	137	48	81	296	131	47	38
23:35	11/03/2006	0	121	51	61	178	91	41	36
05:35	12/03/2006	0	110	51	58	159	88	39	35
11:35	12/03/2006	0	95	63	72	184	118	50	34
17:35	12/03/2006	0	116	62	70	358	117	58	53
23:35	12/03/2006	0	127	58	63	188	97	44	36
05:35	13/03/2006	0	115	50	58	171	93	40	34
11:35	13/03/2006	0	115	51	58	231	89	40	41
17:35	13/03/2006	0	152	78	70	314	111	45	40
23:35	13/03/2006	0	131	60	79	203	102	44	39
05:35	14/03/2006	0	117	51	61	177	92	40	35
11:35	14/03/2006	0	109	50	58	167	84	37	34
17:35	14/03/2006	0	129	74	64	194	122	41	29
23:35	14/03/2006	0	124	56	65	198	100	52	37
05:35	15/03/2006	0	124	54	63	197	100	44	36
11:35	15/03/2006	0	105	73	65	273	130	43	45
17:35	15/03/2006	0	175	52	61	375	101	58	65
23:35	15/03/2006	0	143	59	68	312	108	53	40
05:35	16/03/2006	0	118	54	64	197	100	42	37
11:35	16/03/2006	0	102	57	68	204	130	54	38
17:35	16/03/2006	0	154	86	86	355	141	47	42
23:35	16/03/2006	0	139	59	66	221	106	44	40
05:35	17/03/2006	0	99	72	62	207	96	42	37
11:35	17/03/2006	0	124	42	65	192	95	48	36
17:35	17/03/2006	0	143	78	82	222	114	45	41
23:35	17/03/2006	0	139	78	67	237	108	46	49
05:35	18/03/2006	0	111	73	68	216	110	54	39
11:35	18/03/2006	0	133	57	65	210	102	51	36
17:35	18/03/2006	0	140	76	82	308	92	60	43
23:35	18/03/2006	0	144	60	66	224	110	44	39
05:35	19/03/2006	0	140	63	69	231	115	53	39
11:35	19/03/2006	0	138	48	68	306	84	55	39
17:35	19/03/2006	0	158	83	70	338	85	47	40
23:35	19/03/2006	0	143	80	67	231	144	49	43
05:35	20/03/2006	0	146	80	72	221	136	57	43
11:35	20/03/2006	0	139	62	84	236	81	45	39
17:35	20/03/2006	0	155	86	76	271	125	60	43
23:35	20/03/2006	0	142	80	75	232	85	60	41
05:35	21/03/2006	0	138	95	82	222	109	55	40
11:35	21/03/2006	0	145	79	83	258	132	58	41
17:35	21/03/2006	0	167	71	89	300	154	49	57
23:35	21/03/2006	0	137	82	87	250	104	50	40
05:35	22/03/2006	0	142	60	80	215	104	45	43
11:35	22/03/2006	0	126	75	54	216	99	57	39
17:35	22/03/2006	0	158	70	90	366	112	49	44
23:35	22/03/2006	0	132	61	69	293	101	41	42
05:35	23/03/2006	0	119	60	69	282	100	47	49
11:35	23/03/2006	0	122	76	69	228	95	59	41
17:35	23/03/2006	0	133	72	74	280	136	54	45
23:35	23/03/2006	0	95	79	66	282	99	60	57
05:35	24/03/2006	0	57	54	64	168	82	46	41
11:35	24/03/2006	0	88	42	75	220	136	61	42
17:35	24/03/2006	0	53	57	67	218	90	54	60
23:35	24/03/2006	0	47	61	72	163	96	50	65
05:35	25/03/2006	0	31	42	51	128	70	58	51
11:35	25/03/2006	0	45	49	60	88	51	49	43
17:35	25/03/2006	0	56	47	57	88	83	51	55
23:35	25/03/2006	0	34	44	51	76	73	49	42
05:35	26/03/2006	0	20	24	34	62	66	60	43
11:35	26/03/2006	0	14	30	42	60	46	61	52
18:01	26/03/2006	0	21	23	39	56	43	51	54
23:35	26/03/2006	0	27	18	35	61	50	59	42
05:35	27/03/2006	0	25	17	32	44	48	59	45
11:35	27/03/2006	0	14	14	21	43	41	60	33
17:35	27/03/2006	0	24	15	31	53	47	51	44
23:35	27/03/2006	0	18	12	19	46	37	55	40
05:35	28/03/2006	0	19	10	16	28	27	46	53
11:35	28/03/2006	0	20	10	15	32	34	47	39
17:35	28/03/2006	0	31	7	23	35	29	63	45
23:35	28/03/2006	0	15	9	13	28	22	43	39
05:35	29/03/2006	0	43	5	16	26	21	43	39
11:35	29/03/2006	0	91	13	18	21	22	47	52
17:35	29/03/2006	0	59	16	31	39	36	43	59

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	29/03/2006	0	32	11	21	37	33	57	43
05:35	30/03/2006	0	31	11	24	34	31	49	49
11:35	30/03/2006	0	41	7	9	46	35	52	44
17:35	30/03/2006	0	35	8	15	32	40	71	75
23:35	30/03/2006	0	22	10	18	34	25	62	45
05:35	31/03/2006	0	18	8	16	33	23	57	43
11:35	31/03/2006	0	13	7	15	32	22	40	55
17:35	31/03/2006	0	28	14	13	29	20	60	48
23:35	31/03/2006	0	20	3	8	23	29	49	54
05:35	01/04/2006	0	1	3	6	28	27	55	40
11:35	01/04/2006	0	3	4	10	19	18	56	42
17:35	01/04/2006	0	11	5	11	21	19	49	43
23:35	01/04/2006	0	5	3	5	24	11	37	33
05:35	02/04/2006	0	10	3	4	21	15	42	39
11:35	02/04/2006	0	14	3	1	14	16	47	41
17:35	02/04/2006	0	7	5	6	21	19	71	48
23:35	02/04/2006	0	6	4	9	18	16	50	46
05:35	03/04/2006	0	9	2	1	22	20	47	42
11:35	03/04/2006	0	2	7	4	17	15	54	43
17:35	03/04/2006	0	9	5	6	22	20	68	56
23:35	03/04/2006	0	16	3	6	23	13	63	55
05:35	04/04/2006	0	2	2	6	22	19	60	43
11:35	04/04/2006	0	5	2	3	16	13	55	46
17:35	04/04/2006	0	7	4	3	27	14	62	52
23:35	04/04/2006	0	2	2	6	15	17	52	46
05:35	05/04/2006	0	9	0	1	14	14	61	56
11:35	05/04/2006	0	5	5	1	22	15	66	45
17:35	05/04/2006	11	8	7	0	15	22	100	34
23:35	05/04/2006	5	6	2	2	17	23	75	43
05:35	06/04/2006	4	9	4	0	6	19	93	34
11:35	06/04/2006	1	12	8	0	11	22	82	43
17:35	06/04/2006	6	15	5	0	8	15	108	47
23:35	06/04/2006	4	3	5	0	11	14	103	46
05:35	07/04/2006	4	0	4	0	15	7	90	29
11:35	07/04/2006	4	0	1	0	10	18	82	36
17:35	07/04/2006	4	0	1	0	7	13	88	29
23:35	07/04/2006	8	2	7	0	9	11	45	43
05:35	08/04/2006	4	11	4	0	13	16	75	51
11:35	08/04/2006	11	11	6	0	5	10	68	42
17:35	08/04/2006	5	14	8	0	7	8	66	48
23:35	08/04/2006	14	18	1	0	11	2	75	54
05:35	09/04/2006	3	13	0	0	14	8	98	42
11:35	09/04/2006	4	12	2	0	8	5	82	33
17:35	09/04/2006	5	15	4	0	17	18	120	41
23:35	09/04/2006	5	19	13	0	10	3	66	46
05:35	10/04/2006	1	11	3	0	15	3	77	35
11:35	10/04/2006	5	14	1	0	10	3	86	48
17:35	10/04/2006	5	15	4	0	13	5	93	42
23:35	10/04/2006	1	18	2	0	15	7	77	37
05:35	11/04/2006	1	18	0	0	13	3	88	43
11:35	11/04/2006	2	13	0	0	10	4	61	36
17:35	11/04/2006	2	13	0	0	8	5	90	60
23:35	11/04/2006	4	8	33	0	14	3	75	36
05:35	12/04/2006	1	8	20	0	9	2	71	41
11:35	12/04/2006	5	9	33	0	9	3	82	36
17:35	12/04/2006	6	19	37	0	13	5	77	52
23:35	12/04/2006	6	25	32	0	13	11	88	49
05:35	13/04/2006	5	21	27	0	1	8	74	37
11:35	13/04/2006	9	16	28	0	14	4	90	47
17:35	13/04/2006	11	18	32	0	2	11	86	40
23:35	13/04/2006	4	15	24	27	2	9	74	35
05:35	14/04/2006	4	14	35	34	6	9	75	34
11:35	14/04/2006	6	17	29	28	6	3	84	37
17:35	14/04/2006	8	22	44	31	15	9	103	55
23:35	14/04/2006	6	13	31	20	34	19	82	35
05:35	15/04/2006	6	20	30	24	27	9	103	57
11:35	15/04/2006	5	17	27	27	98	7	74	28
17:35	15/04/2006	7	21	33	29	115	5	90	39
23:35	15/04/2006	6	35	22	20	174	9	77	43
05:35	16/04/2006	9	25	24	16	127	16	84	39
11:35	16/04/2006	15	23	29	28	115	13	77	34
17:35	16/04/2006	11	27	27	21	112	15	120	29
23:35	16/04/2006	14	31	30	22	134	30	71	43
05:35	17/04/2006	12	20	28	21	101	34	71	33

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	17/04/2006	12	21	14	12	80	38	88	32
17:35	17/04/2006	15	28	38	20	174	160	90	41
23:35	17/04/2006	14	22	23	21	124	227	95	29
05:35	18/04/2006	14	21	38	17	124	152	90	41
11:35	18/04/2006	17	28	36	19	118	164	74	41
17:35	18/04/2006	18	41	54	22	137	190	111	43
23:35	18/04/2006	17	25	46	19	134	190	84	48
05:35	19/04/2006	15	24	39	21	70	156	74	34
11:35	19/04/2006	21	34	40	21	118	181	103	43
17:35	19/04/2006	23	35	33	22	127	172	108	46
00:02	20/04/2006	18	29	35	18	98	131	86	36
05:35	20/04/2006	20	30	41	16	109	215	130	46
11:35	20/04/2006	24	36	42	20	98	152	100	42
17:35	20/04/2006	24	38	47	23	112	185	114	45
23:35	20/04/2006	23	32	40	26	91	122	88	34
05:35	21/04/2006	30	23	35	18	82	164	63	47
11:35	21/04/2006	36	36	40	19	86	135	88	42
17:35	21/04/2006	38	40	45	27	76	128	108	45
23:35	21/04/2006	24	45	38	18	118	185	130	38
05:35	22/04/2006	16	41	35	21	63	108	70	52
11:35	22/04/2006	22	22	34	12	50	125	84	33
17:35	22/04/2006	14	33	40	23	86	122	68	43
23:35	22/04/2006	20	29	36	12	49	84	93	33
05:35	23/04/2006	29	21	46	16	71	122	66	41
11:35	23/04/2006	28	38	42	21	70	160	82	39
17:35	23/04/2006	28	42	51	23	86	149	103	45
23:35	23/04/2006	16	32	41	19	86	98	82	30
05:35	24/04/2006	22	40	49	17	63	113	75	36
11:35	24/04/2006	27	41	46	21	74	142	98	43
17:35	24/04/2006	31	45	54	27	91	172	120	50
23:35	24/04/2006	25	52	37	30	78	135	100	34
05:35	25/04/2006	25	35	47	13	47	135	75	38
11:35	25/04/2006	32	43	47	20	71	142	100	42
17:35	25/04/2006	33	52	59	26	91	168	137	52
23:35	25/04/2006	20	31	46	21	68	135	123	43
05:35	26/04/2006	40	36	65	18	58	105	108	30
11:35	26/04/2006	35	49	50	21	68	135	103	45
17:35	26/04/2006	35	71	57	26	80	164	120	50
23:35	26/04/2006	20	38	44	19	55	119	88	41
05:35	27/04/2006	31	48	60	21	53	122	77	38
11:35	27/04/2006	35	34	47	20	55	122	88	40
17:35	27/04/2006	32	60	51	21	63	135	103	47
23:35	27/04/2006	34	43	60	20	52	111	108	39
05:35	28/04/2006	33	49	49	21	45	108	90	41
11:35	28/04/2006	43	57	56	22	61	131	103	47
17:35	28/04/2006	42	57	59	25	66	145	120	51
23:35	28/04/2006	40	49	57	21	44	122	77	46
05:35	29/04/2006	36	48	44	22	46	125	84	39
11:35	29/04/2006	43	57	57	22	55	93	103	46
17:35	29/04/2006	38	55	44	26	56	142	98	46
23:35	29/04/2006	37	49	47	19	59	103	86	31
05:35	30/04/2006	37	48	46	19	44	93	111	46
11:35	30/04/2006	37	60	46	22	31	68	95	37
17:35	30/04/2006	37	51	59	23	68	113	123	43
23:35	30/04/2006	28	46	62	19	36	119	68	38
05:35	01/05/2006	29	43	77	22	39	88	90	45
11:35	01/05/2006	48	34	49	18	40	84	82	42
17:35	01/05/2006	46	62	63	19	42	113	75	46
23:35	01/05/2006	3	37	47	18	50	103	84	35
05:35	02/05/2006	6	9	38	18	50	100	68	40
11:35	02/05/2006	5	10	56	18	52	84	70	41
17:35	02/05/2006	10	10	45	21	45	86	74	45
23:35	02/05/2006	1	9	36	20	53	84	55	42
05:35	03/05/2006	1	5	22	19	39	90	77	39
11:35	03/05/2006	4	8	28	26	35	88	111	35
17:35	03/05/2006	4	18	31	19	55	108	84	41
23:35	03/05/2006	5	10	17	26	35	93	93	37
05:35	04/05/2006	5	9	22	23	42	142	74	36
11:35	04/05/2006	4	12	25	19	47	98	77	38
17:35	04/05/2006	7	16	33	24	61	125	106	49
23:35	04/05/2006	2	12	26	19	59	119	106	40
05:35	05/05/2006	4	10	22	27	40	84	86	35
11:35	05/05/2006	6	14	24	18	47	95	84	41
17:35	05/05/2006	9	19	35	24	61	128	111	51

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	05/05/2006	7	30	32	20	53	90	88	54
05:35	06/05/2006	6	10	19	22	56	111	77	31
11:35	06/05/2006	8	16	28	17	46	108	95	41
17:35	06/05/2006	9	20	34	19	56	125	79	50
23:35	06/05/2006	6	15	28	12	37	100	106	52
05:35	07/05/2006	7	20	26	11	28	72	77	37
11:35	07/05/2006	12	21	34	18	52	125	108	51
17:35	07/05/2006	9	21	32	18	52	116	103	47
23:35	07/05/2006	9	12	29	16	29	72	106	40
05:35	08/05/2006	10	15	32	13	32	100	75	36
11:35	08/05/2006	21	28	40	20	49	125	120	54
17:35	08/05/2006	6	21	29	15	37	86	79	39
23:35	08/05/2006	5	11	26	18	45	108	74	36
05:35	09/05/2006	4	10	30	13	32	84	59	36
11:35	09/05/2006	4	9	21	18	32	105	108	57
17:35	09/05/2006	5	5	25	15	35	108	82	49
23:35	09/05/2006	5	5	12	9	42	84	71	47
05:35	10/05/2006	4	15	23	12	41	103	93	45
11:35	10/05/2006	6	10	24	13	34	86	79	50
17:35	10/05/2006	6	13	20	17	42	103	88	46
23:35	10/05/2006	5	9	17	12	45	105	75	47
05:35	11/05/2006	4	9	23	10	21	63	90	35
11:35	11/05/2006	8	15	23	15	36	108	93	48
17:35	11/05/2006	7	14	22	15	39	111	103	47
23:35	11/05/2006	6	11	20	8	24	138	86	51
05:35	12/05/2006	5	11	18	11	28	122	93	31
11:35	12/05/2006	6	13	20	12	34	93	93	42
17:35	12/05/2006	8	16	24	13	26	100	120	47
23:35	12/05/2006	5	17	15	9	27	86	63	48
05:35	13/05/2006	6	13	19	10	33	108	79	38
11:35	13/05/2006	3	15	21	11	28	90	82	43
17:35	13/05/2006	8	18	25	13	32	119	95	48
23:35	13/05/2006	6	13	20	14	26	100	59	40
05:35	14/05/2006	7	21	15	9	24	61	70	48
11:35	14/05/2006	8	21	20	9	25	80	77	39
17:35	14/05/2006	8	21	20	14	24	76	100	31
23:35	14/05/2006	9	9	22	11	33	103	74	29
05:35	15/05/2006	8	20	20	9	39	90	86	34
11:35	15/05/2006	11	18	25	11	26	86	86	42
17:35	15/05/2006	12	22	30	14	34	105	106	48
23:35	15/05/2006	10	23	23	11	34	78	84	34
05:35	16/05/2006	9	25	21	8	20	68	64	34
11:35	16/05/2006	14	21	28	12	28	90	93	42
17:35	16/05/2006	14	21	29	14	29	100	98	48
23:35	16/05/2006	14	14	20	12	24	86	86	54
05:35	17/05/2006	16	21	24	8	19	82	77	51
11:35	17/05/2006	15	21	27	8	24	100	63	32
17:35	17/05/2006	21	30	35	15	32	103	111	50
23:35	17/05/2006	19	12	30	13	27	70	90	56
05:35	18/05/2006	17	28	23	13	20	52	56	52
11:35	18/05/2006	22	31	31	12	23	84	86	46
17:35	18/05/2006	23	34	38	15	29	100	100	50
23:35	18/05/2006	32	29	24	8	23	84	68	41
05:35	19/05/2006	22	27	26	10	34	68	56	36
11:35	19/05/2006	34	32	31	16	28	70	71	57
17:35	19/05/2006	35	46	36	12	17	78	82	42
23:35	19/05/2006	28	25	42	12	27	74	93	36
05:35	20/05/2006	26	40	30	10	24	59	63	41
11:35	20/05/2006	32	51	36	12	22	72	70	31
17:35	20/05/2006	33	31	51	18	23	76	71	29
23:35	20/05/2006	31	58	37	12	21	70	70	36
05:35	21/05/2006	17	38	49	12	27	70	52	28
11:35	21/05/2006	5	11	47	13	29	80	70	43
17:35	21/05/2006	2	6	39	10	24	90	58	36
23:35	21/05/2006	6	13	38	11	34	80	74	40
05:35	22/05/2006	6	7	32	15	25	76	70	36
11:35	22/05/2006	6	12	31	15	31	88	84	43
17:35	22/05/2006	8	26	37	20	39	108	108	51
23:35	22/05/2006	6	15	39	16	29	84	106	43
05:35	23/05/2006	3	8	25	13	33	70	71	30
11:35	23/05/2006	6	14	27	13	26	72	75	38
17:35	23/05/2006	8	15	29	15	30	66	82	43
23:35	23/05/2006	8	10	27	18	27	78	75	38
05:35	24/05/2006	8	21	26	17	24	58	71	37

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	24/05/2006	8	5	26	9	24	68	68	36
17:35	24/05/2006	6	12	28	9	18	68	71	36
23:35	24/05/2006	2	7	27	20	30	64	86	36
05:35	25/05/2006	2	7	26	12	24	80	82	43
11:35	25/05/2006	6	12	23	13	24	56	70	36
17:35	25/05/2006	3	14	19	13	36	93	71	37
23:35	25/05/2006	3	8	24	13	26	88	70	36
05:35	26/05/2006	6	18	17	12	25	70	66	36
11:35	26/05/2006	6	15	25	13	26	72	68	36
17:35	26/05/2006	6	14	19	9	28	78	70	36
23:35	26/05/2006	6	14	23	16	19	90	79	56
05:35	27/05/2006	4	9	15	10	21	72	71	30
11:35	27/05/2006	8	16	27	14	29	78	79	41
17:35	27/05/2006	8	17	33	15	32	86	84	36
23:35	27/05/2006	8	21	46	13	28	74	74	37
05:35	28/05/2006	6	18	30	7	22	64	63	40
11:35	28/05/2006	10	17	28	14	25	80	74	39
17:35	28/05/2006	11	20	36	15	31	90	93	45
23:35	28/05/2006	10	22	29	18	19	76	70	38
05:35	29/05/2006	11	11	33	11	30	86	68	27
11:35	29/05/2006	16	24	35	16	31	88	88	45
17:35	29/05/2006	14	21	35	15	30	82	86	46
23:35	29/05/2006	14	27	31	13	18	58	58	37
05:35	30/05/2006	20	20	19	15	21	61	82	51
11:35	30/05/2006	18	30	40	13	24	72	70	37
17:35	30/05/2006	18	26	37	12	26	58	77	38
23:35	30/05/2006	18	23	25	12	24	70	68	36
05:35	31/05/2006	17	29	35	12	21	74	66	34
11:35	31/05/2006	25	32	39	16	29	78	82	42
17:35	31/05/2006	23	33	44	16	32	86	88	36
23:35	31/05/2006	24	31	39	11	28	70	84	42
05:35	01/06/2006	23	21	27	12	21	63	56	34
11:35	01/06/2006	34	41	46	16	31	84	95	46
17:35	01/06/2006	33	43	57	20	35	98	108	50
23:35	01/06/2006	31	51	57	16	29	78	86	45
05:35	02/06/2006	30	45	37	13	21	80	66	36
11:35	02/06/2006	41	52	59	19	32	90	100	48
17:35	02/06/2006	40	55	65	22	35	90	108	52
23:35	02/06/2006	34	43	50	17	28	78	86	43
05:35	03/06/2006	37	45	49	16	25	68	82	39
11:35	03/06/2006	41	54	57	18	31	82	93	46
17:35	03/06/2006	38	46	40	17	26	70	75	39
23:35	03/06/2006	38	45	47	15	18	68	68	36
05:35	04/06/2006	37	45	46	15	23	63	70	35
11:35	04/06/2006	46	60	62	18	28	70	79	41
17:35	04/06/2006	41	58	68	20	32	78	90	47
23:35	04/06/2006	41	49	56	14	27	66	70	31
05:35	05/06/2006	52	36	51	16	24	58	63	29
11:35	05/06/2006	52	66	68	22	34	78	90	46
17:35	05/06/2006	52	67	81	24	30	88	98	49
23:35	05/06/2006	43	55	56	19	39	52	71	36
05:35	06/06/2006	37	55	60	16	17	66	56	36
11:35	06/06/2006	48	35	62	20	30	66	71	36
17:35	06/06/2006	45	58	50	27	32	66	106	32
23:35	06/06/2006	57	43	62	21	30	63	68	37
05:35	07/06/2006	46	66	56	19	26	55	71	32
11:35	07/06/2006	54	60	65	17	24	63	70	38
17:35	07/06/2006	49	66	72	26	39	72	64	41
23:35	07/06/2006	51	62	54	24	29	70	77	38
05:35	08/06/2006	49	69	62	28	44	59	64	34
11:35	08/06/2006	60	73	79	27	41	74	79	41
17:35	08/06/2006	51	71	85	30	47	78	84	43
23:35	08/06/2006	52	64	73	27	40	88	71	39
05:35	09/06/2006	67	75	68	19	29	78	88	43
11:35	09/06/2006	55	66	72	26	37	61	86	45
17:35	09/06/2006	48	57	68	24	36	58	61	34
23:35	09/06/2006	71	48	81	25	37	59	53	36
05:35	10/06/2006	57	45	83	24	36	58	64	35
11:35	10/06/2006	58	67	72	27	40	61	70	36
17:35	10/06/2006	58	75	81	30	45	66	75	41
23:35	10/06/2006	55	66	75	22	44	76	66	36
05:35	11/06/2006	46	66	70	31	40	76	63	28
11:35	11/06/2006	55	66	73	27	41	55	61	33
17:35	11/06/2006	55	55	81	29	49	68	75	39

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	11/06/2006	52	66	94	27	34	63	66	32
05:35	12/06/2006	45	54	77	28	45	61	66	36
11:35	12/06/2006	69	78	85	32	49	68	71	38
17:35	12/06/2006	55	89	98	37	61	76	86	45
23:35	12/06/2006	54	71	83	38	52	84	64	39
05:35	13/06/2006	55	62	85	27	45	56	63	33
11:35	13/06/2006	66	82	92	32	56	68	82	43
17:35	13/06/2006	66	94	106	39	68	86	95	50
23:35	13/06/2006	58	78	85	31	47	72	82	42
05:35	14/06/2006	60	52	77	30	49	55	70	38
11:35	14/06/2006	71	89	94	33	59	74	84	45
17:35	14/06/2006	64	97	111	42	71	93	106	51
23:35	14/06/2006	62	80	89	36	59	76	86	46
05:35	15/06/2006	58	66	79	30	55	63	66	37
11:35	15/06/2006	80	94	98	38	64	80	93	47
17:35	15/06/2006	67	92	103	40	66	82	98	48
23:35	15/06/2006	62	78	87	33	42	72	84	43
05:35	16/06/2006	54	75	68	32	47	61	71	38
11:35	16/06/2006	82	97	98	38	63	76	93	47
17:35	16/06/2006	67	92	103	39	63	80	93	49
23:35	16/06/2006	67	80	87	34	53	68	82	34
05:35	17/06/2006	66	71	66	30	59	56	68	36
11:35	17/06/2006	87	102	106	38	63	78	90	47
17:35	17/06/2006	75	105	114	43	66	80	95	49
23:35	17/06/2006	71	78	106	33	50	76	70	39
05:35	18/06/2006	75	84	87	31	49	58	64	37
11:35	18/06/2006	71	92	96	36	55	64	79	42
17:35	18/06/2006	64	97	108	42	68	74	93	50
23:35	18/06/2006	55	78	87	36	56	78	79	41
05:35	19/06/2006	58	78	81	34	53	56	70	49
11:35	19/06/2006	30	78	85	33	52	59	68	36
17:35	19/06/2006	6	73	87	36	56	61	71	38
23:35	19/06/2006	7	60	83	34	44	58	70	38
05:35	20/06/2006	6	43	75	32	47	52	56	33
11:35	20/06/2006	8	46	87	36	56	58	71	38
17:35	20/06/2006	15	55	111	47	78	78	95	49
23:35	20/06/2006	7	36	77	36	61	59	86	29
05:35	21/06/2006	6	18	94	34	55	55	66	36
11:35	21/06/2006	6	14	75	34	55	70	86	35
17:35	21/06/2006	7	18	81	38	63	59	68	38
23:35	21/06/2006	6	10	75	36	47	59	68	36
05:35	22/06/2006	6	21	83	27	55	63	75	32
11:35	22/06/2006	8	18	77	42	71	66	77	41
17:35	22/06/2006	9	21	83	45	80	70	86	43
23:35	22/06/2006	9	18	54	30	64	59	66	37
05:35	23/06/2006	9	23	72	32	52	52	75	35
11:35	23/06/2006	15	26	73	41	76	70	75	43
17:35	23/06/2006	12	23	72	39	71	63	79	40
23:35	23/06/2006	15	24	79	36	80	61	84	43
05:35	24/06/2006	14	28	70	30	42	61	58	32
11:35	24/06/2006	22	32	75	40	71	70	82	43
17:35	24/06/2006	24	38	81	46	80	76	93	48
23:35	24/06/2006	23	33	68	38	53	64	74	40
05:35	25/06/2006	23	32	63	34	46	53	49	36
11:35	25/06/2006	32	41	79	40	74	63	77	41
17:35	25/06/2006	28	41	66	39	78	68	79	45
23:35	25/06/2006	38	41	75	38	66	59	71	41
05:35	26/06/2006	29	43	60	32	52	39	63	35
11:35	26/06/2006	40	48	83	40	70	66	77	42
17:35	26/06/2006	36	52	92	45	80	74	93	50
23:35	26/06/2006	35	48	75	39	66	64	77	41
05:35	27/06/2006	36	42	73	33	58	56	63	36
11:35	27/06/2006	48	58	87	40	71	66	84	46
17:35	27/06/2006	41	64	106	49	91	76	106	54
23:35	27/06/2006	42	57	83	41	74	66	86	47
05:35	28/06/2006	35	46	68	32	55	49	63	37
11:35	28/06/2006	49	60	87	38	66	63	84	43
17:35	28/06/2006	45	67	103	43	76	74	93	50
23:35	28/06/2006	43	57	87	39	64	61	74	41
05:35	29/06/2006	45	54	72	34	58	66	64	37
11:35	29/06/2006	54	57	83	38	63	59	75	38
17:35	29/06/2006	46	67	94	40	64	56	77	43
23:35	29/06/2006	48	55	101	37	59	53	68	36
05:35	30/06/2006	51	69	77	33	53	37	56	34



MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	30/06/2006	64	73	96	40	64	55	74	40
17:35	30/06/2006	60	82	111	45	74	66	84	46
23:35	30/06/2006	57	67	96	34	68	56	70	38
05:35	01/07/2006	58	84	85	37	58	52	61	35
11:35	01/07/2006	66	75	94	40	63	49	66	33
17:35	01/07/2006	64	89	119	46	80	63	79	42
23:35	01/07/2006	66	57	96	42	71	53	66	36
05:35	02/07/2006	64	66	83	38	61	45	56	30
11:35	02/07/2006	78	97	119	50	80	61	74	41
17:35	02/07/2006	66	92	116	51	84	59	70	40
23:35	02/07/2006	71	84	108	45	74	53	66	37
05:35	03/07/2006	66	73	89	37	59	43	53	29
11:35	03/07/2006	97	108	125	50	88	58	74	39
17:35	03/07/2006	78	114	144	59	103	70	90	47
23:35	03/07/2006	75	97	116	47	82	59	66	40
05:35	04/07/2006	69	94	106	46	71	53	64	37
11:35	04/07/2006	102	118	131	53	91	59	74	42
17:35	04/07/2006	93	134	159	63	111	74	96	52
23:35	04/07/2006	88	112	135	54	87	61	81	43
05:35	05/07/2006	95	101	112	48	77	54	65	36
11:35	05/07/2006	96	111	128	50	83	53	71	38
17:35	05/07/2006	99	122	143	60	100	62	78	44
23:35	05/07/2006	97	104	119	50	76	52	66	30
05:35	06/07/2006	104	106	113	49	76	52	61	35
11:35	06/07/2006	119	129	142	57	93	57	74	40
17:35	06/07/2006	101	123	150	57	97	59	71	40
23:35	06/07/2006	114	127	138	58	75	61	68	38
05:35	07/07/2006	112	116	133	53	85	54	63	43
11:35	07/07/2006	119	124	140	56	90	53	67	37
17:35	07/07/2006	118	130	139	54	87	51	62	33
23:35	07/07/2006	120	120	129	51	87	50	59	35
05:35	08/07/2006	128	130	137	44	88	48	57	27
11:35	08/07/2006	141	136	150	56	94	39	61	33
17:35	08/07/2006	131	139	157	62	104	54	67	36
23:35	08/07/2006	129	138	127	73	98	53	75	36
05:35	09/07/2006	137	128	120	57	100	52	59	36
11:35	09/07/2006	162	169	165	67	112	56	69	39
17:35	09/07/2006	117	149	179	71	123	56	65	38
23:35	09/07/2006	125	135	204	64	111	55	65	33
05:35	10/07/2006	141	136	151	61	101	51	62	34
11:35	10/07/2006	146	160	180	71	120	56	63	40
17:35	10/07/2006	132	158	185	68	118	57	66	39
23:35	10/07/2006	140	72	162	62	114	52	59	35
05:35	11/07/2006	4	7	20	64	107	48	58	32
11:35	11/07/2006	4	8	13	18	71	50	57	32
17:35	11/07/2006	4	8	9	7	78	51	61	35
23:35	11/07/2006	4	7	14	5	65	51	57	35
05:35	12/07/2006	3	3	11	3	53	47	52	30
11:35	12/07/2006	3	6	12	3	51	54	64	36
17:35	12/07/2006	5	8	15	5	52	57	65	40
23:35	12/07/2006	5	9	15	5	44	53	59	34
05:35	13/07/2006	3	3	12	6	33	51	50	33
11:35	13/07/2006	6	10	15	5	40	60	63	38
17:35	13/07/2006	5	9	15	6	38	55	63	39
23:35	13/07/2006	4	7	13	5	32	52	52	35
05:35	14/07/2006	3	6	11	3	25	37	57	31
11:35	14/07/2006	5	8	14	4	30	54	59	36
17:35	14/07/2006	4	10	14	4	28	57	58	33
23:35	14/07/2006	4	7	14	3	33	48	51	33
05:35	15/07/2006	4	7	8	4	22	48	49	33
11:35	15/07/2006	5	9	15	4	27	54	60	35
17:35	15/07/2006	6	11	17	5	30	60	67	41
23:35	15/07/2006	5	4	8	4	22	50	53	34
05:35	16/07/2006	4	1	12	4	21	47	49	33
11:35	16/07/2006	4	7	12	3	21	46	50	34
17:35	16/07/2006	5	11	16	6	28	57	64	42
23:35	16/07/2006	4	14	14	5	17	63	57	33
05:35	17/07/2006	3	7	13	4	19	47	51	32
11:35	17/07/2006	5	9	15	6	24	52	62	38
17:35	17/07/2006	5	12	17	6	27	55	66	41
23:35	17/07/2006	5	6	10	5	24	49	60	36
05:35	18/07/2006	4	10	13	4	21	46	52	40
11:35	18/07/2006	7	12	16	6	23	55	63	39
17:35	18/07/2006	5	10	14	5	19	43	53	34

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	18/07/2006	5	12	12	2	21	46	52	34
05:35	19/07/2006	4	9	15	5	20	42	48	32
11:35	19/07/2006	7	13	18	5	23	52	58	38
17:35	19/07/2006	11	16	24	7	28	57	69	41
23:35	19/07/2006	14	17	21	7	26	50	47	40
05:35	20/07/2006	8	11	12	8	20	45	50	31
11:35	20/07/2006	20	26	25	8	26	56	65	42
17:35	20/07/2006	22	29	30	8	29	59	75	46
23:35	20/07/2006	20	23	24	7	23	48	57	29
05:35	21/07/2006	20	15	20	6	14	42	51	33
11:35	21/07/2006	27	32	27	8	27	53	67	41
17:35	21/07/2006	28	37	33	9	29	59	76	45
23:35	21/07/2006	27	40	27	8	23	48	57	38
05:35	22/07/2006	28	39	27	6	22	42	52	33
11:35	22/07/2006	39	43	35	9	28	52	70	43
17:35	22/07/2006	37	50	42	12	32	63	85	49
23:35	22/07/2006	35	28	33	6	24	48	56	39
05:35	23/07/2006	35	28	30	7	14	40	54	33
11:35	23/07/2006	36	43	34	8	20	39	54	36
17:35	23/07/2006	43	54	47	13	29	58	74	46
23:35	23/07/2006	42	47	44	11	28	49	67	41
05:35	24/07/2006	41	40	37	9	21	41	70	33
11:35	24/07/2006	42	45	36	9	20	39	50	34
17:35	24/07/2006	42	54	52	13	28	52	68	42
23:35	24/07/2006	52	47	43	7	24	45	56	29
05:35	25/07/2006	45	45	41	10	22	39	53	33
11:35	25/07/2006	58	64	55	13	31	52	68	42
17:35	25/07/2006	43	53	51	13	28	48	62	38
23:35	25/07/2006	44	62	46	12	23	40	51	33
05:35	26/07/2006	47	48	42	11	23	37	51	33
11:35	26/07/2006	48	49	45	12	23	38	49	32
17:35	26/07/2006	48	52	51	8	24	39	51	33
23:35	26/07/2006	46	52	46	12	24	50	47	30
05:35	27/07/2006	34	54	52	12	25	37	48	29
11:35	27/07/2006	27	72	54	14	27	41	50	32
17:35	27/07/2006	23	57	57	15	27	43	57	35
23:35	27/07/2006	22	47	51	15	27	40	39	29
05:35	28/07/2006	24	44	49	13	34	48	47	28
11:35	28/07/2006	28	52	55	15	28	42	48	31
17:35	28/07/2006	30	59	63	18	34	49	60	35
23:35	28/07/2006	28	49	53	17	31	44	56	30
05:35	29/07/2006	33	47	51	16	27	40	49	28
11:35	29/07/2006	34	49	41	16	28	39	38	29
17:35	29/07/2006	37	55	57	18	30	44	56	30
23:35	29/07/2006	38	53	53	17	29	42	55	32
05:35	30/07/2006	25	49	51	12	27	38	37	27
11:35	30/07/2006	26	49	52	17	27	49	49	35
17:35	30/07/2006	9	48	54	17	29	38	49	27
23:35	30/07/2006	5	35	54	18	29	38	47	20
05:35	31/07/2006	5	17	60	16	28	37	45	25
11:35	31/07/2006	7	19	56	19	33	43	51	27
17:35	31/07/2006	5	12	66	18	25	39	47	26
23:35	31/07/2006	5	8	48	19	31	39	61	26
05:35	01/08/2006	3	8	35	16	29	46	40	23
11:35	01/08/2006	5	9	32	20	35	41	50	26
17:35	01/08/2006	5	9	26	21	37	42	53	27
23:35	01/08/2006	4	2	22	17	34	42	57	18
05:35	02/08/2006	3	6	17	15	30	33	39	28
11:35	02/08/2006	5	9	19	17	34	41	48	24
17:35	02/08/2006	5	9	20	17	37	46	65	26
23:35	02/08/2006	5	9	26	16	44	44	49	30
05:35	03/08/2006	4	4	17	16	31	51	48	22
11:35	03/08/2006	6	10	22	16	37	43	51	19
17:35	03/08/2006	7	11	21	16	35	34	52	24
23:35	03/08/2006	5	9	19	15	33	40	39	23
05:35	04/08/2006	5	16	19	14	38	40	37	24
11:35	04/08/2006	6	10	19	14	31	45	55	23
17:35	04/08/2006	5	10	19	14	34	47	55	25
23:35	04/08/2006	4	13	18	12	29	39	47	22
05:35	05/08/2006	5	9	18	12	29	40	56	20
11:35	05/08/2006	5	11	22	13	33	47	50	22
17:35	05/08/2006	5	10	20	13	33	41	51	23
23:35	05/08/2006	3	7	21	9	32	43	51	23
05:35	06/08/2006	5	9	19	11	26	39	56	20

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	06/08/2006	9	14	26	14	34	49	58	26
17:35	06/08/2006	8	14	27	14	36	53	63	29
23:35	06/08/2006	8	13	17	13	30	47	55	24
05:35	07/08/2006	7	17	21	12	26	45	49	21
11:35	07/08/2006	11	17	27	13	33	53	61	25
17:35	07/08/2006	15	21	31	15	37	56	68	30
23:35	07/08/2006	13	17	25	12	31	37	58	24
05:35	08/08/2006	13	18	24	11	27	46	66	23
11:35	08/08/2006	12	21	25	11	26	42	51	22
17:35	08/08/2006	13	18	27	13	28	48	62	26
23:35	08/08/2006	13	21	25	11	29	45	58	23
05:35	09/08/2006	14	21	26	12	28	44	55	22
11:35	09/08/2006	12	21	27	12	26	46	56	24
17:35	09/08/2006	13	21	27	13	30	43	56	24
23:35	09/08/2006	14	15	28	9	28	36	58	25
05:35	10/08/2006	13	17	22	10	30	38	50	20
11:35	10/08/2006	18	24	29	11	28	44	56	24
17:35	10/08/2006	19	31	33	15	31	53	65	28
23:35	10/08/2006	19	23	29	12	26	41	66	22
05:35	11/08/2006	18	22	24	10	21	37	48	19
11:35	11/08/2006	23	27	32	12	26	31	52	21
17:35	11/08/2006	22	31	34	13	28	45	58	25
23:35	11/08/2006	15	28	33	13	27	42	53	21
05:35	12/08/2006	24	28	24	11	19	29	37	20
11:35	12/08/2006	29	35	35	14	28	43	56	24
17:35	12/08/2006	25	37	36	13	28	42	41	23
23:35	12/08/2006	27	43	34	12	27	32	67	22
05:35	13/08/2006	27	17	33	12	31	47	47	19
11:35	13/08/2006	34	41	39	14	30	42	59	24
17:35	13/08/2006	38	56	54	19	39	57	74	31
23:35	13/08/2006	31	38	37	18	27	42	57	23
05:35	14/08/2006	33	38	36	13	34	40	48	16
11:35	14/08/2006	44	48	45	16	32	46	62	26
17:35	14/08/2006	36	50	46	16	32	47	65	26
23:35	14/08/2006	37	56	42	15	30	46	57	22
05:35	15/08/2006	31	44	40	13	25	40	65	15
11:35	15/08/2006	23	49	52	17	31	46	59	26
17:35	15/08/2006	5	9	42	15	26	39	49	22
23:35	15/08/2006	5	12	38	14	28	29	48	26
05:35	16/08/2006	4	9	33	14	24	28	46	20
11:35	16/08/2006	7	10	31	17	33	46	57	24
17:35	16/08/2006	6	10	26	16	30	46	54	25
23:35	16/08/2006	5	8	12	14	28	37	50	19
05:35	17/08/2006	2	12	18	14	27	38	47	20
11:35	17/08/2006	5	9	19	15	31	42	54	22
17:35	17/08/2006	5	9	20	16	35	45	54	25
23:35	17/08/2006	5	10	18	14	31	45	53	22
05:35	18/08/2006	5	14	11	13	29	41	50	20
11:35	18/08/2006	6	10	19	13	32	46	58	24
17:35	18/08/2006	8	13	24	16	42	57	68	29
23:35	18/08/2006	5	9	17	12	29	44	51	21
05:35	19/08/2006	4	9	17	10	25	40	47	20
11:35	19/08/2006	7	10	19	13	31	46	57	24
17:35	19/08/2006	7	10	21	13	32	35	55	25
23:35	19/08/2006	6	14	25	12	26	41	50	19
05:35	20/08/2006	4	5	18	10	26	35	37	15
11:35	20/08/2006	6	11	21	10	27	43	53	22
17:35	20/08/2006	6	13	23	13	34	48	59	24
23:35	20/08/2006	6	7	22	7	28	42	51	21
05:35	21/08/2006	5	6	20	6	25	39	47	16
11:35	21/08/2006	8	13	24	12	30	46	60	23
17:35	21/08/2006	11	18	29	13	34	52	61	27
23:35	21/08/2006	14	17	27	12	28	47	56	22
05:35	22/08/2006	15	18	22	11	19	44	42	22
11:35	22/08/2006	20	22	27	11	28	47	58	24
17:35	22/08/2006	24	32	33	15	35	59	73	31
23:35	22/08/2006	19	25	27	11	28	46	72	25
05:35	23/08/2006	20	23	25	10	25	42	53	23
11:35	23/08/2006	22	33	26	11	25	42	52	21
17:35	23/08/2006	21	25	27	8	25	42	52	16
23:35	23/08/2006	20	32	28	11	18	64	48	26
05:35	24/08/2006	21	25	26	10	24	38	48	25
11:35	24/08/2006	28	30	31	13	29	42	54	23
17:35	24/08/2006	26	35	38	14	32	50	62	26

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	24/08/2006	25	40	31	13	38	46	53	25
05:35	25/08/2006	27	52	30	12	26	41	48	21
11:35	25/08/2006	27	37	33	13	28	46	58	23
17:35	25/08/2006	31	42	38	14	31	51	61	25
23:35	25/08/2006	32	37	36	12	26	42	52	22
05:35	26/08/2006	33	37	25	12	26	43	48	20
11:35	26/08/2006	39	43	39	13	26	42	52	24
17:35	26/08/2006	38	50	44	16	34	50	62	27
23:35	26/08/2006	35	52	29	13	27	42	53	22
05:35	27/08/2006	35	39	36	11	25	48	58	20
11:35	27/08/2006	44	49	41	13	28	46	51	22
17:35	27/08/2006	40	50	46	14	31	47	56	25
23:35	27/08/2006	50	32	34	14	27	45	51	22
05:35	28/08/2006	42	35	42	13	34	41	38	22
11:35	28/08/2006	48	55	48	15	31	41	50	22
17:35	28/08/2006	53	67	61	18	36	58	70	28
23:35	28/08/2006	48	56	52	16	31	51	60	24
05:35	29/08/2006	48	62	45	15	35	43	42	23
11:35	29/08/2006	45	53	47	13	26	42	47	20
17:35	29/08/2006	49	60	55	15	32	45	54	25
23:35	29/08/2006	45	52	52	15	21	55	52	16
05:35	30/08/2006	45	53	48	15	38	39	38	15
11:35	30/08/2006	47	55	52	15	25	41	48	19
17:35	30/08/2006	49	41	40	15	29	30	49	21
23:35	30/08/2006	47	39	40	15	28	38	37	21
05:35	31/08/2006	39	51	51	15	27	40	34	20
11:35	31/08/2006	38	52	41	13	22	39	46	21
17:35	31/08/2006	36	60	58	17	33	47	53	22
23:35	31/08/2006	34	50	53	17	31	40	46	26
05:35	01/09/2006	34	46	39	16	29	49	43	19
11:35	01/09/2006	41	55	55	18	31	43	51	21
17:35	01/09/2006	43	64	67	21	42	53	62	25
23:35	01/09/2006	38	52	54	19	37	45	41	22
05:35	02/09/2006	38	51	55	17	34	43	47	20
11:35	02/09/2006	44	58	60	20	38	50	55	24
17:35	02/09/2006	51	73	79	26	50	62	71	30
23:35	02/09/2006	45	58	62	21	40	48	56	26
05:35	03/09/2006	41	38	40	19	34	42	50	29
11:35	03/09/2006	54	67	63	21	42	52	61	25
17:35	03/09/2006	54	77	74	26	50	60	70	28
23:35	03/09/2006	50	47	49	21	41	51	61	25
05:35	04/09/2006	46	41	52	14	35	34	48	28
11:35	04/09/2006	53	68	59	21	40	49	57	23
17:35	04/09/2006	55	76	75	25	48	58	70	31
23:35	04/09/2006	50	57	57	21	37	34	54	23
05:35	05/09/2006	49	56	58	20	44	45	50	28
11:35	05/09/2006	51	62	59	20	37	47	53	22
17:35	05/09/2006	58	72	73	24	45	56	65	28
23:35	05/09/2006	54	81	47	22	30	47	51	23
05:35	06/09/2006	57	55	70	25	34	33	49	16
11:35	06/09/2006	58	71	63	21	36	46	52	24
17:35	06/09/2006	60	80	75	24	45	55	62	26
23:35	06/09/2006	59	62	62	22	37	47	42	23
05:35	07/09/2006	52	59	59	21	34	42	62	22
11:35	07/09/2006	57	61	60	20	32	42	51	21
17:35	07/09/2006	62	72	65	21	39	47	55	21
23:35	07/09/2006	60	62	65	21	37	58	39	22
05:35	08/09/2006	60	58	49	21	36	52	46	20
11:35	08/09/2006	59	67	68	23	40	46	49	22
17:35	08/09/2006	65	78	80	22	47	54	61	25
23:35	08/09/2006	61	70	73	23	39	47	51	23
05:35	09/09/2006	61	85	52	22	40	43	38	21
11:35	09/09/2006	68	69	70	24	41	49	53	21
17:35	09/09/2006	74	86	83	29	50	55	62	26
23:35	09/09/2006	66	74	74	25	44	52	55	24
05:35	10/09/2006	66	106	69	29	31	56	50	22
11:35	10/09/2006	69	75	68	24	40	40	50	23
17:35	10/09/2006	64	80	74	25	42	51	53	23
23:35	10/09/2006	66	56	70	24	42	47	52	21
05:35	11/09/2006	71	67	71	23	40	54	60	15
11:35	11/09/2006	82	78	74	25	42	47	56	22
17:35	11/09/2006	74	87	84	29	50	51	59	26
23:35	11/09/2006	95	90	57	24	40	42	38	21
05:35	12/09/2006	91	70	66	18	50	42	35	20

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
11:35	12/09/2006	94	91	76	25	45	49	51	23
17:35	12/09/2006	79	91	89	30	50	50	54	23
23:35	12/09/2006	80	62	68	26	43	35	38	20
05:35	13/09/2006	79	73	52	24	39	30	42	19
11:35	13/09/2006	93	90	78	27	45	45	49	22
17:35	13/09/2006	110	99	87	30	62	64	55	23
23:35	13/09/2006	81	63	75	27	53	33	44	16
05:35	14/09/2006	86	80	71	25	53	41	57	24
11:35	14/09/2006	85	104	91	25	57	30	55	18
17:35	14/09/2006	53	92	95	22	58	33	37	21
23:35	14/09/2006	31	106	92	32	55	49	41	25
05:35	15/09/2006	36	72	78	26	45	52	32	32
11:35	15/09/2006	38	112	82	22	39	45	43	19
17:35	15/09/2006	37	99	73	39	57	38	49	21
23:35	15/09/2006	37	66	106	23	51	42	33	19
05:35	16/09/2006	44	81	79	35	47	41	52	19
11:35	16/09/2006	41	63	99	28	48	39	31	12
17:35	16/09/2006	34	68	92	32	45	47	48	15
23:35	16/09/2006	38	82	84	35	53	33	35	25
05:35	17/09/2006	2	8	84	30	54	33	42	19
11:35	17/09/2006	6	14	85	31	57	44	54	20
17:35	17/09/2006	6	10	92	27	60	47	58	20
23:35	17/09/2006	6	9	89	39	51	34	37	16
05:35	18/09/2006	9	5	83	32	62	60	43	19
11:35	18/09/2006	6	5	79	37	75	35	43	19
17:35	18/09/2006	7	8	87	36	73	56	49	17
23:35	18/09/2006	5	10	62	33	52	62	47	33
05:35	19/09/2006	5	20	63	30	91	59	52	26
11:35	19/09/2006	6	10	67	32	51	48	45	20
17:35	19/09/2006	7	10	69	34	73	57	50	24
23:35	19/09/2006	6	11	50	34	90	54	50	27
05:35	20/09/2006	6	6	57	27	64	50	44	20
11:35	20/09/2006	7	11	60	33	68	52	50	20
17:35	20/09/2006	12	8	57	27	71	61	49	21
23:35	20/09/2006	7	16	51	47	69	70	50	21
05:35	21/09/2006	6	12	62	30	68	54	37	27
11:35	21/09/2006	6	11	47	30	66	50	37	20
17:35	21/09/2006	6	12	35	30	66	69	49	27
23:35	21/09/2006	7	8	58	25	68	57	60	21
05:35	22/09/2006	7	8	44	29	82	54	38	17
11:35	22/09/2006	3	7	54	27	64	54	47	22
17:35	22/09/2006	9	10	50	34	75	63	58	24
23:35	22/09/2006	6	8	32	28	100	72	48	21
05:35	23/09/2006	6	8	47	25	71	51	57	19
11:35	23/09/2006	8	14	42	25	66	58	52	21
17:35	23/09/2006	9	17	48	37	93	63	55	32
23:35	23/09/2006	6	12	38	24	57	54	61	18
05:35	24/09/2006	8	9	50	20	60	57	46	21
11:35	24/09/2006	8	17	44	27	66	45	50	21
17:35	24/09/2006	10	19	49	24	75	68	63	33
23:35	24/09/2006	10	17	43	32	62	56	49	22
05:35	25/09/2006	12	12	39	25	75	69	49	21
11:35	25/09/2006	13	19	32	26	68	57	37	20
17:35	25/09/2006	14	14	33	26	78	78	58	22
23:35	25/09/2006	14	19	42	25	45	74	65	30
05:35	26/09/2006	20	13	49	29	55	57	47	20
11:35	26/09/2006	14	26	38	18	55	71	48	20
17:35	26/09/2006	8	15	41	19	56	58	49	22
23:35	26/09/2006	16	23	48	25	51	66	56	14
05:35	27/09/2006	10	17	29	20	31	77	32	25
11:35	27/09/2006	11	20	39	22	45	55	48	20
17:35	27/09/2006	13	23	35	27	59	60	49	21
23:35	27/09/2006	8	19	43	35	45	74	48	21
05:35	28/09/2006	7	14	41	23	58	71	38	21
11:35	28/09/2006	7	15	45	24	61	60	56	23
17:35	28/09/2006	7	15	46	24	64	67	57	24
23:35	28/09/2006	8	4	32	24	59	76	38	22
05:35	29/09/2006	6	7	34	22	42	53	49	20
11:35	29/09/2006	7	8	45	23	56	59	42	22
17:35	29/09/2006	8	10	37	19	61	72	54	29
23:35	29/09/2006	3	7	33	27	70	61	61	36
05:35	30/09/2006	4	14	41	22	65	58	75	16
11:35	30/09/2006	6	12	30	25	54	59	45	15
17:35	30/09/2006	8	16	45	24	65	68	43	25

MLSB Coke Deep Cover Soil Suction (kPa)

Time	Date	Sensor Depth (cm)							
		5 cm	10 cm	20 cm	25 cm	30 cm	40 cm	90 cm	180 cm
23:35	30/09/2006	6	13	30	25	41	70	59	26
05:35	01/10/2006	6	17	38	19	52	56	37	31
11:35	01/10/2006	7	8	30	26	53	61	39	26
17:35	01/10/2006	12	19	31	26	42	49	62	29
23:35	01/10/2006	3	7	35	20	65	58	58	21
05:35	02/10/2006	6	11	26	15	50	72	47	20
11:35	02/10/2006	6	11	25	23	49	52	45	19
17:35	02/10/2006	7	20	30	21	53	67	53	18
23:35	02/10/2006	7	7	34	18	48	57	37	27
05:35	03/10/2006	3	11	18	16	43	70	54	24
11:35	03/10/2006	6	11	24	13	36	70	69	19
17:35	03/10/2006	8	16	31	21	61	67	58	24
23:35	03/10/2006	7	13	27	23	53	60	63	22
05:35	04/10/2006	7	8	33	21	48	58	57	26
11:35	04/10/2006	7	14	26	14	63	62	49	16
17:35	04/10/2006	10	19	34	23	63	75	61	25
23:35	04/10/2006	8	21	35	18	54	81	64	29
05:35	05/10/2006	8	15	36	24	67	62	54	28
11:35	05/10/2006	7	14	25	17	49	60	48	19

## **Coke Watershed - Meteorological Station Data**

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
01/01/2005	-33.1	822	0.67	758	0	246	-23.7	2258	0.78	2322	4.3	1930
02/01/2005	-23.8	1	0.64	1201	0.7	2230	-17.9	1439	0.8	302	6.6	749
03/01/2005	-29.3	1118	0.7	1117	0	1008	-19.2	1	0.81	1303	3.7	342
04/01/2005	-30.8	718	0.7	536	1.1	42	-12.3	2346	0.82	1641	6.9	1814
05/01/2005	-13.7	929	0.67	441	0.9	2307	-5.8	1611	0.86	2359	7.9	1353
06/01/2005	-14.4	2203	0.78	1436	0.6	1849	-6.5	12	0.92	36	12.7	1036
07/01/2005	-18.3	2352	0.62	1650	0.4	427	-10.3	1414	0.87	438	5.4	1647
08/01/2005	-26.2	2332	0.74	1548	0	1743	-18.1	56	0.84	3	6.4	410
09/01/2005	-30.7	658	0.69	2245	1.2	45	-19.6	0	0.77	2032	5.4	1104
10/01/2005	-20.6	2359	0.57	1602	0	1545	-16.3	557	0.82	435	6.3	617
11/01/2005	-25.6	2053	0.74	2345	3.2	358	-20.6	2	0.81	3	9.2	1730
12/01/2005	-28.3	949	0.56	1532	0.2	1016	-20.7	1426	0.75	106	6.4	441
13/01/2005	-31.7	2328	0.59	2214	0.2	1215	-25.7	1552	0.71	327	4.8	2150
14/01/2005	-32.1	151	0.56	1523	0.5	2147	-23.9	1556	0.75	2101	6.3	1407
15/01/2005	-30.4	1048	0.42	1412	0	1338	-19.5	1408	0.74	1959	3.6	2344
16/01/2005	-33.9	927	0.66	1023	0.7	537	-19.5	2343	0.74	2151	5.4	2254
17/01/2005	-19.5	1	0.7	403	0	1346	-12.5	1424	0.86	1717	8	1937
18/01/2005	-23.3	2235	0.62	1420	0	1331	-15.5	1407	0.81	1022	8	126
19/01/2005	-23.3	41	0.73	246	0.2	229	-19.3	2339	0.82	2242	5.3	809
20/01/2005	-26.9	2247	0.72	2355	0	430	-16.5	1318	0.84	1253	8	2000
21/01/2005	-32.1	920	0.64	1329	0	520	-23.9	1715	0.78	404	6.4	2026
22/01/2005	-24.4	3	0.69	1113	0.4	1057	-10.2	2030	0.9	2116	7.1	811
23/01/2005	-10.5	1	0.82	1450	1	1444	1.7	1429	0.95	2018	5.5	522
24/01/2005	-13.3	2357	0.75	1540	0	804	7.3	1537	0.95	1251	11.5	1913
25/01/2005	-15.9	1230	0.72	1458	0	1454	-13.3	1	0.87	2024	6.4	4
26/01/2005	-13.6	2	0.8	1417	1.9	1729	-3.4	2134	0.88	1951	7	2053
27/01/2005	-18.3	0	0.7	2345	0	947	-2.7	348	0.92	959	10	1019
28/01/2005	-22	1748	0.69	759	1.8	1653	-18.3	2	0.79	1759	9.2	46
29/01/2005	-21	12	0.78	23	0	949	-9.3	1838	0.89	2333	5.1	2233
30/01/2005	-16.5	511	0.74	746	0	541	-10.4	2358	0.9	2208	5.7	9
31/01/2005	-10.5	726	0.53	1632	0	925	8.4	1633	0.94	805	9.9	1935
01/02/2005	-7.1	127	0.59	2232	0.7	1442	6.4	1449	0.95	544	8.1	1255
02/02/2005	-18.4	2350	0.54	1525	2	2154	8.6	441	0.88	820	13	737
03/02/2005	-25.5	2009	0.64	104	1.3	134	-17.6	228	0.82	805	10.6	1348
04/02/2005	-26.4	841	0.71	1406	1.2	956	-22	2103	0.79	2102	5.7	2133
05/02/2005	-23.5	0	0.74	1501	1.1	556	-19.4	1532	0.8	1911	5.2	922
06/02/2005	-25.8	625	0.73	1612	0	842	-18.4	1611	0.82	1959	3.5	1711
07/02/2005	-24.8	703	0.63	1643	1.8	1	-8.4	1638	0.81	16	5.8	1136
08/02/2005	-14.5	917	0.71	1232	0.8	1805	-6.2	1706	0.9	2346	3.7	1415
09/02/2005	-12.2	457	0.63	1532	0.9	227	2.6	1532	0.92	412	8.2	1459
10/02/2005	-26.4	841	0.71	1406	1.2	956	-22	2103	0.79	2102	5.7	2133
11/02/2005	-23.5	0	0.74	1501	1.1	556	-19.4	1532	0.8	1911	5.2	922
12/02/2005	-25.8	625	0.73	1612	0	842	-18.4	1611	0.82	1959	3.5	1711
13/02/2005	-24.8	703	0.63	1643	1.8	1	-8.4	1638	0.81	16	5.8	1136
14/02/2005	-14.5	917	0.71	1232	0.8	1805	-6.2	1706	0.9	2346	3.7	1415
15/02/2005	-12.2	457	0.63	1532	0.9	227	2.6	1532	0.92	412	8.2	1459
16/02/2005	-21.4	928	0.71	1834	0	319	-11	2314	0.9	53	5.4	2340
17/02/2005	-16.8	1023	0.71	1623	0	1609	-8.6	1614	0.87	742	5.8	1
18/02/2005	-13.9	907	0.72	1628	0	627	-6.7	1721	0.89	1014	5.3	1057
19/02/2005	-19.8	849	0.63	1831	0.8	1128	-6.3	1759	0.89	102	4.2	5
20/02/2005	-15.7	2057	0.72	1651	0	639	-7.5	951	0.9	727	6.5	1216
21/02/2005	-18.7	850	0.63	1427	0.1	1325	-11.6	1419	0.86	152	5.1	1106
22/02/2005	-17.8	127	0.66	1637	0	1904	-5.3	1714	0.89	2345	5	532
23/02/2005	-16.8	814	0.64	1706	0	552	-1.6	1908	0.9	47	5.6	2247
24/02/2005	-11.3	2345	0.43	1503	0	57	3.9	1503	0.93	2248	4.5	1743
25/02/2005	-14.5	758	0.71	1604	0	523	2.5	1519	0.94	1140	3.3	6
26/02/2005	-14.2	753	0.74	1808	0	504	-4.1	1752	0.93	1323	4.8	708
27/02/2005	-11.8	612	0.66	1736	0.5	109	-1	1751	0.91	1026	5.1	1604
28/02/2005	-11.1	855	0.47	1920	0.3	1950	4.3	1832	0.91	644	4.8	103
01/03/2005	-8.8	857	0.45	1555	0	1710	5	1554	0.84	844	5.3	800
02/03/2005	-8.2	836	0.46	1631	0	1507	8.6	1631	0.86	844	5.2	49
03/03/2005	-5.5	2327	0.51	1559	0	1429	5.8	1557	0.95	855	4.7	2043
04/03/2005	-7.2	838	0.5	1600	0	925	5.8	1559	0.87	905	4.7	2252
05/03/2005	-6.5	448	0.41	1610	0	759	12.3	1612	0.86	748	7.5	2019
06/03/2005	-11.4	2358	0.68	1418	1.3	1139	-2.9	1	0.92	720	6.6	600
07/03/2005	-14.8	730	0.59	1310	0	322	0.1	1511	0.93	2359	4.1	1748
08/03/2005	-5.8	810	0.61	1950	0	427	5.2	1651	0.94	822	4	2246
09/03/2005	-2.5	2358	0.59	1720	0.5	425	6.7	1720	0.92	2201	12.3	932
10/03/2005	-10.1	920	0.55	1210	0	1130	-1.6	1713	0.87	18	7.5	52
11/03/2005	-10.7	2340	0.7	504	0	1803	-4.8	502	0.89	2019	8.4	1001
12/03/2005	-15.5	955	0.57	1319	0	2140	-9.7	1919	0.88	42	8	439
13/03/2005	-11.6	423	0.5	1648	0	1011	-2.6	1639	0.81	506	3.7	241
14/03/2005	-15.7	2317	0.53	938	0.3	406	-3.7	130	0.88	655	12.1	1034
15/03/2005	-21.5	820	0.44	1720	0.4	1050	-9.4	1736	0.84	302	5.2	2024
16/03/2005	-21.5	735	0.35	1829	0	1010	-3.3	1447	0.86	1015	5.5	2342
17/03/2005	-13.5	856	0.48	1603	1.3	1518	-2.8	1813	0.83	2354	7.1	2029
18/03/2005	-8.8	851	0.79	1322	0.2	728	-4.6	1501	0.91	2039	8.5	1959
19/03/2005	-13.6	908	0.32	1824	0	1748	-3.2	1749	0.91	107	7.7	111
20/03/2005	-17.5	826	0.44	1712	0.1	512	-2.8	1643	0.82	738	9	2329
21/03/2005	-7.6	1028	0.63	2	2.9	2332	-2.5	1609	0.92	2320	10	16
22/03/2005	-11.4	2351	0.53	2007	1.9	236	-3	1457	0.92	241	9.5	1933
23/03/2005	-16.7	741	0.41	1749	0	1002	-3.3	1210	0.84	748	3.6	37



MLSB Coke Watershed Meteorological Station Data

date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
01/01/2005	-28	0.73	2.1	161	0	-1.3	13.5	1014	0	-0.1	7.56
02/01/2005	-19.7	0.75	2.9	231	0	-1	13.5	1038	0	-0.1	10.44
03/01/2005	-25.3	0.76	2	121	0	-2.8	13.4	1003	0	-0.3	7.2
04/01/2005	-23.8	0.75	3	149	0	-1.4	13.5	946	0	-0.4	10.8
05/01/2005	-9.9	0.75	4.4	207	0	-1.2	13.4	957	0	-0.3	15.84
06/01/2005	-10.3	0.85	6.3	241	0	-1.4	13.3	1007	0	-0.3	22.68
07/01/2005	-13.6	0.77	2.2	248	0	-2.2	13.3	1028	0	-0.5	7.92
08/01/2005	-21.6	0.79	1.9	153	0	-2.5	13.4	1014	0	-0.7	6.84
09/01/2005	-26	0.73	3.1	189	0	-2.5	13.5	1008	0	-0.9	11.16
10/01/2005	-18.5	0.71	2.7	207	0	-1.1	13.5	1006	0	-0.9	9.72
11/01/2005	-24.2	0.77	5.6	32	0	-1.2	13.5	1023	0	-0.9	20.16
12/01/2005	-25.6	0.69	2.6	219	0	-2.4	13.5	1018	0	-1.1	9.36
13/01/2005	-29.1	0.66	2.6	238	0	-3.2	13.5	953	0	-1.3	9.36
14/01/2005	-28.5	0.64	2.8	249	0	-2.7	13.6	959	0	-1.5	10.08
15/01/2005	-27.2	0.68	1.8	216	0	-2.7	13.6	959	0	-1.8	6.48
16/01/2005	-27.6	0.71	2.8	146	0	-1.9	13.6	944	0	-1.9	10.08
17/01/2005	-15.5	0.79	4.1	154	0.3	0.5	13.5	1035	0.3	-1.6	14.76
18/01/2005	-20.4	0.77	3	64	0	-0.3	13.4	1012	0.3	-1.5	10.8
19/01/2005	-20.9	0.79	2.6	210	0	0.2	13.5	1038	0.3	-1.4	9.36
20/01/2005	-19.4	0.81	2.5	181	0	-0.7	13.5	1004	0.3	-1.4	9
21/01/2005	-26.5	0.73	2.3	195	0	-2.4	13.5	955	0.3	-1.6	8.28
22/01/2005	-16.3	0.78	4.3	167	0	-0.1	13.6	1002	0.3	-1.4	15.48
23/01/2005	-4.2	0.89	3.1	171	0	0.2	13.3	1019	0.3	-1.2	11.16
24/01/2005	-3.6	0.91	3	172	1.5	-0.2	13.2	1049	1.8	-1.1	10.8
25/01/2005	-14.8	0.81	2.5	89	0	-0.1	13.1	1020	1.8	-0.9	9
26/01/2005	-9.5	0.85	3.8	145	3	-0.5	13.4	944	4.8	-0.8	13.68
27/01/2005	-9.7	0.84	5.4	98	0	0.2	13.2	1013	4.8	-0.5	19.44
28/01/2005	-20.9	0.74	4.5	60	0	0.3	13.4	959	4.8	-0.3	16.2
29/01/2005	-15.6	0.82	2.3	236	0.3	0.2	13.5	953	5.1	-0.2	8.28
30/01/2005	-14.6	0.84	2.3	109	0	0.1	13.4	950	5.1	0	8.28
31/01/2005	-2.5	0.83	3.6	169	0	-0.6	13.3	2358	5.1	0.1	12.96
01/02/2005	1.2	0.79	3.5	177	0	-1.6	13.1	924	5.1	0.2	12.6
02/02/2005	-7.6	0.66	6	205	0	-1	13.1	949	5.1	0.7	21.6
03/02/2005	-20.9	0.76	5.1	94	0	-0.5	13.4	1006	5.1	0.8	18.36
04/02/2005	-24.1	0.74	3.6	136	0	0.1	13.5	947	5.1	0.9	12.96
05/02/2005	-21.3	0.78	3.8	261	0	0.1	13.5	949	5.1	1.1	13.68
06/02/2005	-22.3	0.77	1.9	210	0	-1.3	13.5	918	5.1	1	6.84
07/02/2005	-17	0.75	3.3	155	0	-2.4	13.5	920	5.1	0.8	11.88
08/02/2005	-9.9	0.79	2.2	182	0	-2.4	13.4	914	5.1	0.5	7.92
09/02/2005	-4.9	0.79	3.6	187	0.3	-2.4	13.4	855	5.4	0.3	12.96
10/02/2005	-24.1	0.74	3.6	136	0	0.1	13.5	947	5.4	0.5	12.96
11/02/2005	-21.3	0.78	3.8	261	0	0.1	13.5	949	5.4	0.6	13.68
12/02/2005	-22.3	0.77	1.9	210	0	-1.3	13.5	918	5.4	0.5	6.84
13/02/2005	-17	0.75	3.3	155	0	-2.4	13.5	920	5.4	0.4	11.88
14/02/2005	-9.9	0.79	2.2	182	0	-2.4	13.4	914	5.4	0.1	7.92
15/02/2005	-4.9	0.79	3.6	187	0.3	-2.4	13.4	855	5.7	-0.1	12.96
16/02/2005	-15.1	0.8	1.3	232	0	-0.3	13.4	856	5.7	0	4.68
17/02/2005	-13.1	0.82	2.2	130	0	0	13.4	921	5.7	0.1	7.92
18/02/2005	-10.5	0.82	2.5	170	0	-1.4	13.4	906	5.7	0	9
19/02/2005	-12.9	0.79	2.2	152	0	-1.1	13.4	850	5.7	0	7.92
20/02/2005	-10.7	0.8	2.9	130	0	-1.3	13.4	903	5.7	-0.1	10.44
21/02/2005	-15.3	0.79	2.6	158	0	-0.8	13.4	855	5.7	-0.1	9.36
22/02/2005	-11.4	0.79	2.6	170	0	-0.3	13.5	848	5.7	0.1	9.36
23/02/2005	-9.1	0.8	2.1	176	0	-0.5	13.4	833	5.7	0.1	7.56
24/02/2005	-5.9	0.76	2.3	125	0	-1.4	13.3	846	5.7	0.1	8.28
25/02/2005	-7.5	0.85	0.9	142	0	-1	13.3	831	5.7	0	3.24
26/02/2005	-8	0.86	1.3	167	0	-0.5	13.3	851	5.7	0.1	4.68
27/02/2005	-6.4	0.8	2.9	134	0	-0.7	13.3	835	5.7	0.2	10.44
28/02/2005	-3.7	0.73	2.4	124	0	-1.3	13.3	826	5.7	0.2	8.64
01/03/2005	-2.4	0.68	2.8	125	0	-1.4	13.2	811	5.7	0.4	10.08
02/03/2005	0.3	0.66	2.8	166	0	-1.7	13.2	824	5.7	0.6	10.08
03/03/2005	-0.4	0.75	2.4	159	0	-1.1	13.1	831	5.7	0.7	8.64
04/03/2005	-1.6	0.72	1.6	212	0	-0.3	13.2	842	5.7	0.9	5.76
05/03/2005	1.2	0.68	2.5	203	0	1.2	13.2	831	5.7	1.8	9
06/03/2005	-7.3	0.79	3.8	128	0	0.1	13.1	813	5.7	2.1	13.68
07/03/2005	-7.6	0.8	1.6	181	0	0.1	13.4	814	5.7	2.3	5.76
08/03/2005	0	0.82	2	161	0	-0.2	13.2	829	5.7	2.5	7.2
09/03/2005	3.7	0.76	5.2	218	0	1.5	13.1	838	5.7	3.6	18.72
10/03/2005	-5.3	0.74	3.7	60	0	0.5	13.2	800	5.7	4.1	13.32
11/03/2005	-7.7	0.81	4.2	88	0	0.5	13.3	833	5.7	4.5	15.12
12/03/2005	-12.2	0.73	3.6	118	0	0.4	13.4	838	5.7	4.9	12.96
13/03/2005	-8.1	0.71	1.5	176	0	0.9	13.4	823	5.7	5.3	5.4
14/03/2005	-9.1	0.72	4.6	141	0	-0.1	13.3	759	5.7	5.7	16.56
15/03/2005	-14.9	0.67	2.6	187	0	0	13.4	745	5.7	5.9	9.36
16/03/2005	-12.1	0.64	2.4	171	0	0.1	13.4	748	5.7	6.2	8.64
17/03/2005	-8.2	0.63	3.9	130	0	0.1	13.4	754	5.7	6.8	14.04
18/03/2005	-7	0.87	4.8	86	0	0.6	13.3	752	5.7	7.1	17.28
19/03/2005	-8.9	0.72	4.5	99	0	-0.2	13.3	746	5.7	7.5	16.2
20/03/2005	-9.3	0.63	4.1	107	0	0.1	13.4	732	5.7	8	14.76
21/03/2005	-5.5	0.78	5.5	87	0	0.3	13.3	759	5.7	8.5	19.8
22/03/2005	-6.5	0.79	4.7	98	0	0	13.3	751	5.7	8.9	16.92
23/03/2005	-9.4	0.62	1.5	221	0	-0.6	13.4	727	5.7	9.1	5.4

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
24/03/2005	-15.1	716	0.39	1612	0.7	9	2.4	1619	0.85	704	6.1	1151
25/03/2005	-9.8	743	0.32	1744	0.1	1727	5.1	1727	0.75	658	5.3	1752
26/03/2005	-8.9	922	0.41	1607	0	1202	3.7	1428	0.92	2350	6.9	2058
27/03/2005	-2	445	0.77	1438	0.4	2348	1.6	1503	0.95	444	7.1	1550
28/03/2005	-0.7	942	0.59	1821	0	217	9.3	1817	0.96	824	4.9	2315
29/03/2005	0.6	525	0.3	1852	0	1449	12.6	1451	0.9	834	5.9	1710
30/03/2005	-2.5	744	0.24	1813	1.2	124	8.4	1519	0.79	745	9.8	1805
31/03/2005	-3.6	737	0.23	1724	0	1041	8	1733	0.75	737	6.3	2339
01/04/2005	-1.2	721	0.28	1533	0	2047	15	1829	0.7	2312	10.1	2338
02/04/2005	0.6	709	0.23	1647	1.4	131	8.6	1749	0.79	42	12.7	1102
03/04/2005	-1.8	654	0.15	1744	0	542	12.1	1731	0.64	631	4.7	729
04/04/2005	0.7	457	0.32	33	2.1	924	11.9	1418	0.81	2353	8.2	1619
05/04/2005	3	321	0.2	1804	0.8	2317	12.9	1647	0.86	324	7	1223
06/04/2005	0.5	639	0.2	1737	0	341	15.7	1740	0.64	727	4.9	1549
07/04/2005	2.1	749	0.31	1538	0	250	16.1	1632	0.7	709	9.1	2355
08/04/2005	3.8	708	0.41	1558	0	1555	16.3	1555	0.85	2301	7.5	138
09/04/2005	3.8	748	0.4	1600	0.7	0	10.5	1605	0.9	530	6.8	942
10/04/2005	0.2	649	0.34	1706	0	948	11.9	1803	0.81	718	5.9	1906
11/04/2005	-1.2	626	0.13	1619	0	212	12.6	1622	0.82	656	7.9	2347
12/04/2005	1	642	0.43	4	3.4	1601	7.2	1640	0.77	725	10.8	937
13/04/2005	0.1	746	0.75	4	1.7	2256	4.4	1923	0.92	801	8.9	1256
14/04/2005	0.5	2239	0.88	1	0.1	418	3.2	56	0.96	2355	8.7	2015
15/04/2005	0.5	223	0.29	1812	0.5	2358	9.9	1808	0.97	326	12.1	1012
16/04/2005	-0.7	549	0.29	1545	0.4	214	12.3	1537	0.86	551	10.2	1439
17/04/2005	2.2	2357	0.28	1524	0.5	623	12.8	1534	0.86	713	12.8	1755
18/04/2005	-0.9	657	0.24	1606	0	1524	11.1	1643	0.81	657	6.3	19
19/04/2005	1.4	541	0.19	1503	0.4	539	18	1821	0.74	539	8.4	1541
20/04/2005	6	656	0.14	1347	0.8	900	20.4	1342	0.68	703	10.6	1353
21/04/2005	4	613	0.19	1907	0.2	1158	17.8	1713	0.71	551	5.7	2357
22/04/2005	5.2	641	0.18	1548	1.2	239	25.3	1815	0.61	2357	9.9	2230
23/04/2005	5.5	616	0.29	1547	0.7	2323	15.9	1546	0.83	616	8.4	30
24/04/2005	0.9	553	0.2	1857	0	908	16.8	1600	0.87	530	7.1	1528
25/04/2005	2.7	727	0.24	1447	0	515	16.1	1453	0.67	615	10.6	1742
26/04/2005	-0.7	1039	0.47	39	2.3	352	6.4	4	0.75	1044	11.7	1656
27/04/2005	-3.4	1015	0.35	2009	3.5	852	1.6	1708	0.81	1016	10.8	1635
28/04/2005	-5.1	851	0.32	1540	4.4	2253	2.1	1536	0.61	2225	12.8	1617
29/04/2005	-5.7	1039	0.41	34	4.5	2318	-0.9	2	0.85	2016	12.7	936
30/04/2005	-7	730	0.46	1749	3.1	2352	0.6	1730	0.8	14	10.4	437
01/05/2005	-5.7	153	0.14	1803	1.3	1243	4.4	1754	0.74	407	5.9	1100
02/05/2005	-5.4	548	0.1	1814	0.1	859	13.7	1914	0.51	439	5.3	1423
03/05/2005	0	517	0.13	1921	0	1730	16.9	1631	0.46	723	6.5	1513
04/05/2005	3.2	633	0.18	1631	0.2	836	17.7	1629	0.61	637	6.5	138
05/05/2005	3.8	553	0.2	1410	0	404	20.5	1410	0.93	2217	9.7	1641
06/05/2005	6	637	0.31	1807	3.3	2229	13.5	1742	0.92	1	9.8	1451
07/05/2005	0.9	450	0.15	1739	0.3	348	16.6	1833	0.85	525	5.9	1223
08/05/2005	3.9	601	0.16	1613	0	233	20.1	1539	0.6	647	4.9	1424
09/05/2005	-1.6	0	0.27	32	1.1	104	13.7	1	0.85	1024	14.1	338
10/05/2005	-6.1	535	0.16	2010	0.2	1444	6.8	1944	0.69	608	8	2358
11/05/2005	-0.9	522	0.18	1446	1.8	1308	18.1	1534	0.49	550	8.9	1459
12/05/2005	2.3	1800	0.32	1157	0.3	916	17	1007	0.88	1804	14.4	1455
13/05/2005	-1	530	0.16	1803	0.1	1526	12.5	1912	0.75	441	7	812
14/05/2005	2.4	531	0.19	1415	1.4	342	20.8	1824	0.55	545	8.6	2256
15/05/2005	9.4	549	0.19	1343	0.9	1132	21.6	1415	0.48	550	7.7	2220
16/05/2005	10.6	554	0.28	1532	0.1	627	25	1542	0.55	632	7.5	2113
17/05/2005	6.3	748	0.48	3	2	18	17.8	1743	0.85	807	10.9	1529
18/05/2005	9.5	129	0.42	236	0.2	131	17.1	236	0.95	1618	9.4	819
19/05/2005	9.4	616	0.47	1822	1	1454	17.5	1821	0.95	301	5.5	2110
20/05/2005	8.3	411	0.21	1740	0	1009	22	1843	0.94	524	8.5	1525
21/05/2005	7.7	558	0.27	1402	0	426	20.8	1624	0.86	2359	13.3	1735
22/05/2005	6.9	2357	0.37	1654	0.4	945	16.8	1632	0.89	26	9.6	2257
23/05/2005	4.3	548	0.51	1511	2.6	108	11.5	1506	0.83	400	10.9	1637
24/05/2005	3.4	530	0.66	1448	1.7	335	7.7	1627	0.92	1005	6.2	1550
25/05/2005	2.7	942	0.72	653	1	2244	5.9	2	0.92	2359	7.7	556
26/05/2005	2.1	611	0.45	1712	0.9	309	13.6	1816	0.93	37	9.8	1441
27/05/2005	1.9	527	0.21	1843	1.1	1	15.7	1704	0.88	245	9.7	1053
28/05/2005	3.2	325	0.33	1930	0	1336	21.5	1925	0.88	429	7.5	2056
29/05/2005	8.6	527	0.2	1918	1.8	509	24.6	1652	0.83	535	9	1502
30/05/2005	11.4	430	0.16	1727	1.5	307	28.1	1729	0.63	429	9.5	1405
31/05/2005	13.9	447	0.13	1729	0.5	2320	29.5	1658	0.59	2358	8.1	1302
01/06/2005	13	507	0.31	1554	2.3	403	24.8	1650	0.74	429	9.5	2030
02/06/2005	11	527	0.34	1757	3.9	1018	24.6	1636	0.75	530	9.6	1705
03/06/2005	13.5	615	0.24	1718	0.1	918	26.6	1642	0.7	151	7.7	1757
04/06/2005	11.9	608	0.47	1942	1.2	1517	20.5	1802	0.76	622	6.8	1424
05/06/2005	11.3	452	0.24	2058	0	801	24.5	1600	0.85	641	6.1	1500
06/06/2005	10	606	0.27	1700	0	238	24.5	1634	0.75	614	7.5	1453
07/06/2005	11.6	610	0.25	1344	0	134	26.1	1458	0.76	532	4.7	1600
08/06/2005	12.1	523	0.2	1831	0.3	1721	27.5	1629	0.78	521	10.4	2301
09/06/2005	13.5	551	0.35	1529	0.2	207	23.9	1528	0.78	553	9.9	4
10/06/2005	9	0	0.42	1416	1.4	1116	18.2	1409	0.8	553	10.5	1929
11/06/2005	3.4	418	0.51	1123	2.3	406	11.5	1739	0.91	427	9.7	2212
12/06/2005	7.7	420	0.79	2218	2.4	2341	11.6	1755	0.9	2057	8.1	1223
13/06/2005	10.3	613	0.72	1917	0.4	1908	17.3	1916	0.91	1206	7.5	2255

MLSB Coke Watershed Meteorological Station Data

date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
24/03/2005	-5.9	0.62	3.1	207	0	1.1	13.4	725	5.7	9.8	11.16
25/03/2005	-2.9	0.57	2.8	166	0	1.1	13.3	720	5.7	10.7	10.08
26/03/2005	-2.2	0.64	2.7	123	0	1.9	13.2	708	5.7	11.7	9.72
27/03/2005	-0.3	0.89	3.9	112	0	0.6	13.2	742	5.7	12.1	14.04
28/03/2005	2.3	0.85	1.4	160	0	2.5	13.2	744	5.7	12.9	5.04
29/03/2005	5	0.64	2.3	188	0	4.3	13.1	756	5.7	14.7	8.28
30/03/2005	3.3	0.54	3.9	244	0	5.3	13.1	715	5.7	17.2	14.04
31/03/2005	2.5	0.5	2.2	175	0	6	13.1	716	5.7	19.5	7.92
01/04/2005	5.8	0.44	3.2	172	109	6.5	13.1	708	114.7	22.5	11.52
02/04/2005	4.4	0.47	6.2	241	0	6.9	13	715	114.7	26.2	22.32
03/04/2005	4.9	0.41	2.6	168	0	7.7	13.1	654	114.7	29.4	9.36
04/04/2005	5.7	0.54	4.5	135	0	5.7	13.1	658	114.7	32.3	16.2
05/04/2005	7.7	0.46	3.1	200	0	9.9	13.1	736	114.7	36.4	11.16
06/04/2005	8	0.41	1.9	145	0	9.6	13.1	708	114.7	40.2	6.84
07/04/2005	9.6	0.48	3.4	105	0	7.3	13	704	114.7	43.7	12.24
08/04/2005	9.9	0.62	2.7	148	0.3	8.1	13	702	115	47	9.72
09/04/2005	6.7	0.66	3.1	268	0.5	6	13	711	115.5	49.4	11.16
10/04/2005	5.6	0.59	2.5	125	0	7.6	13.1	708	115.5	52.2	9
11/04/2005	6.1	0.48	3	101	0	8.4	13.1	635	115.5	55.7	10.8
12/04/2005	3.5	0.65	7	112	0	5.8	13.1	640	115.5	58.5	25.2
13/04/2005	1.9	0.83	5.3	125	0.8	1.5	13.2	730	116.3	59.4	19.08
14/04/2005	2	0.92	4.6	200	10.4	0.5	13.2	655	126.7	59.7	16.56
15/04/2005	4.3	0.69	6.3	271	14.5	4.6	13.2	731	141.2	62	22.68
16/04/2005	6.1	0.6	5	125	0	8	13.1	635	141.2	65.4	18
17/04/2005	6.7	0.61	5.4	210	0.3	9.9	13.1	648	141.5	69.5	19.44
18/04/2005	5.1	0.54	2.2	216	0	9.8	13.1	639	141.5	73	7.92
19/04/2005	10	0.45	3.2	179	0	9.3	13.1	629	141.5	77.1	11.52
20/04/2005	13.4	0.4	4.3	236	0	12.3	13	634	141.5	83.1	15.48
21/04/2005	11.1	0.45	2.4	155	0	10	13	619	141.5	87.3	8.64
22/04/2005	15.1	0.36	5.1	162	0	10.7	13	626	141.5	93.4	18.36
23/04/2005	10.8	0.56	4.2	172	0	9.3	12.9	632	141.5	97.6	15.12
24/04/2005	10.1	0.51	2.7	130	0	9.9	13.1	622	141.5	101.6	9.72
25/04/2005	9.3	0.43	4.3	100	0	7.2	13	559	141.5	105.5	15.48
26/04/2005	1.8	0.6	7.4	172	0	5.3	13.1	604	141.5	108.3	26.64
27/04/2005	-0.8	0.57	7.2	130	0	7.4	13.2	657	141.5	111.4	25.92
28/04/2005	-1.9	0.47	8.1	216	0	8.8	13.3	611	141.5	115.2	29.16
29/04/2005	-3.5	0.7	8.5	251	0	4.7	13.3	623	141.5	117.2	30.6
30/04/2005	-3.2	0.62	6.5	75	0	9.9	13.3	604	141.5	120.4	23.4
01/05/2005	-0.6	0.4	3.6	125	0	10.1	13.3	602	141.5	124	12.96
02/05/2005	4.9	0.25	2	217	0	10.5	13.2	0	141.5	128	7.2
03/05/2005	9.4	0.27	2.5	203	0	9.7	13.1	554	141.5	132.5	9
04/05/2005	10.7	0.35	2.3	169	0	9	13	535	141.5	136.6	8.28
05/05/2005	11	0.57	3.3	152	5.8	3.8	13	547	147.3	138.9	11.88
06/05/2005	9.3	0.62	6.5	104	0	11.9	13.1	557	147.3	144	23.4
07/05/2005	9.8	0.47	2.6	131	0	11	13.1	544	147.3	148.4	9.36
08/05/2005	13.2	0.32	1.6	175	0	8	13	547	147.3	152.2	5.76
09/05/2005	4.9	0.5	7.8	91	0	10.2	13	558	147.3	157	28.08
10/05/2005	0	0.4	3.5	102	0	10.1	13.2	543	147.3	160.6	12.6
11/05/2005	9.4	0.31	4.9	148	0	0	13.1	0	147.3	160.6	17.64
12/05/2005	8.5	0.53	6.2	135	0.3	0	13	542	147.6	160.6	22.32
13/05/2005	5.7	0.44	2.7	190	0	0	13.2	542	147.6	160.6	9.72
14/05/2005	12.4	0.32	5	128	0	0	13.1	537	147.6	160.6	18
15/05/2005	16	0.33	4	121	0	0	12.9	544	147.6	160.6	14.4
16/05/2005	18.4	0.4	4.3	118	0	0	12.9	606	147.6	160.6	15.48
17/05/2005	11.6	0.68	6.6	62	0.3	0	12.8	723	147.9	160.6	23.76
18/05/2005	12.3	0.77	4.8	93	24.1	0	12.9	1002	172	160.6	17.28
19/05/2005	12.5	0.81	3.1	216	0	0	13	612	172	160.6	11.16
20/05/2005	14.8	0.61	3.1	236	0	0	13	545	172	160.6	11.16
21/05/2005	14	0.58	2.9	260	0	0	12.9	527	172	160.6	10.44
22/05/2005	11	0.62	4.8	78	1.5	0	13	542	173.5	160.6	17.28
23/05/2005	7.3	0.68	6.8	133	0	0	13.1	522	173.5	160.6	24.48
24/05/2005	5.3	0.81	3.6	277	0.8	0	13.1	645	174.3	160.6	12.96
25/05/2005	4.4	0.85	3.5	279	4.1	0	13.2	604	178.4	160.6	12.6
26/05/2005	8.3	0.69	3.6	169	0	0	13.2	529	178.4	160.6	12.96
27/05/2005	9.7	0.58	4.7	147	0	0	13.1	515	178.4	160.6	16.92
28/05/2005	12	0.63	3.2	117	0	0	13.1	521	178.4	160.6	11.52
29/05/2005	17.2	0.47	4.8	151	0	0	12.9	508	178.4	160.6	17.28
30/05/2005	20.8	0.34	4.6	163	0	0	12.9	513	178.4	160.6	16.56
31/05/2005	22.2	0.31	4	150	0	0	12.8	523	178.4	160.6	14.4
01/06/2005	18.3	0.53	5.5	87	0	0	12.8	518	178.4	160.6	19.8
02/06/2005	17.6	0.54	6.4	121	0	0	12.9	523	178.4	160.6	23.04
03/06/2005	19.5	0.48	3.2	91	0	0	12.9	515	178.4	160.6	11.52
04/06/2005	16	0.62	3.9	140	0	0	12.9	509	178.4	160.6	14.04
05/06/2005	18.1	0.52	2.6	152	0	0	12.9	510	178.4	160.6	9.36
06/06/2005	18.2	0.45	2.7	144	0	0	12.9	528	178.4	160.6	9.72
07/06/2005	19.7	0.45	1.7	182	0	0	12.9	516	178.4	160.6	6.12
08/06/2005	20.9	0.43	2.8	157	0	0	12.9	523	178.4	160.6	10.08
09/06/2005	19.1	0.54	4.3	167	0	0	12.8	528	178.4	160.6	15.48
10/06/2005	13.8	0.61	6.3	78	0	0	12.9	508	178.4	160.6	22.68
11/06/2005	8.8	0.68	5.8	85	0.5	0	13.1	449	178.9	160.6	20.88
12/06/2005	9.8	0.86	5.6	45	5.1	0	13	644	184	160.6	20.16
13/06/2005	13.3	0.85	3.6	115	8.6	0	13	641	192.6	160.6	12.96

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date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
14/06/2005	12.1	2301	0.58	1612	0.7	2258	17.2	1608	0.94	532	6.4	2043
15/06/2005	10.6	955	0.72	1846	0	934	15.6	1604	0.95	242	7.2	1125
16/06/2005	9.3	2345	0.39	1645	1.2	2345	17.3	1617	0.89	332	9.2	1403
17/06/2005	4.4	454	0.48	1825	0.2	1009	15.7	1625	0.91	455	7.8	2102
18/06/2005	4	521	0.33	1641	1.2	1655	19.3	1932	0.9	529	7.9	1124
19/06/2005	6.7	525	0.35	1147	0	314	20.8	1145	0.85	414	10.2	1220
20/06/2005	15	0	0.2	1906	0	1309	20.8	1847	0.47	2317	5.1	1806
21/06/2005	11.2	434	0.31	1856	0	2300	27.9	1823	0.78	2359	9.8	1932
22/06/2005	9.1	0	0.71	29	0	49	16.8	11	0.95	1016	10.9	1322
23/06/2005	7	2358	0.8	1805	0	2213	9.2	235	0.95	132	9.9	1314
24/06/2005	4.5	432	0.34	1822	0.4	2254	19.8	1742	0.94	229	6	1631
25/06/2005	9.2	0	0.52	31	0.7	19	16.2	1	0.89	740	8.1	1357
26/06/2005	5.6	428	0.29	2005	0.4	1358	18.6	1710	0.92	205	6	1705
27/06/2005	6.1	557	0.27	1335	0	610	21.4	1530	0.85	323	6	1546
28/06/2005	8.9	505	0.32	1443	0	15	19.9	1326	0.94	2239	6.8	1804
29/06/2005	11.1	500	0.44	1923	0	255	20.3	1840	0.95	549	4.2	2013
30/06/2005	9.2	555	0.18	1605	0	47	26.1	1911	0.92	510	4.5	1510
01/07/2005	12.7	448	0.41	1417	0	2233	24.4	1610	0.82	425	8.3	1913
02/07/2005	10.1	513	0.27	1541	0	1131	26.7	1556	0.9	534	14.1	1659
03/07/2005	12.2	440	0.38	1753	0.5	530	24.5	1737	0.94	444	6	1828
04/07/2005	14	634	0.3	1633	1	2218	26.2	1805	0.83	503	8.2	1356
05/07/2005	15	458	0.28	1436	0	2122	28.6	1547	0.66	812	7.6	1332
06/07/2005	15.3	2358	0.45	31	0	340	24.8	1435	0.92	514	8.4	1928
07/07/2005	12.8	646	0.31	1711	2.1	328	22.5	1735	0.93	47	9.5	1647
08/07/2005	14.2	504	0.24	1747	0	2117	25.6	1715	0.62	353	8.4	1457
09/07/2005	14.3	528	0.27	1658	0	310	23.8	1617	0.91	958	8	1647
10/07/2005	11.6	506	0.38	1632	0.8	2052	22.8	1632	0.72	508	6.9	1759
11/07/2005	11	549	0.23	1336	0	426	26.3	1502	0.84	551	8.5	1825
12/07/2005	11.4	534	0.21	1932	0	244	28.2	1932	0.85	516	5	1518
13/07/2005	13.6	549	0.43	1319	0.1	1338	24.3	1318	0.92	542	6.1	1625
14/07/2005	12.4	331	0.31	1757	1.3	544	25.7	1605	0.87	117	8.4	1545
15/07/2005	12.7	452	0.31	1419	0.5	643	25.7	1432	0.76	446	5.9	1744
16/07/2005	13.8	610	0.52	1641	0.8	935	21.7	1633	0.91	2341	8.4	1641
17/07/2005	12.3	459	0.45	1402	0	933	23.2	1412	0.95	428	6.2	2059
18/07/2005	13	2156	0.56	1528	0	1949	21.8	1500	0.94	500	8.1	1624
19/07/2005	11	515	0.38	1702	0.4	2258	19.8	1747	0.93	553	9.7	1800
20/07/2005	10.7	641	0.35	1442	0	922	21.1	1616	0.86	456	6.7	2145
21/07/2005	9.3	702	0.46	1925	0	813	19.1	1834	0.81	700	5.7	112
22/07/2005	12.2	535	0.49	1444	0	336	23.1	1443	0.9	534	8.8	1905
23/07/2005	8.7	2242	0.74	104	1.1	1829	13.6	1	0.94	1845	10.2	337
24/07/2005	8.4	320	0.74	1513	0.1	1328	12.1	1447	0.94	246	6.2	1522
25/07/2005	6.9	506	0.67	1435	0	2249	16.7	1430	0.94	332	8.2	1659
26/07/2005	6.6	613	0.43	1948	0	1030	15.4	1928	0.92	41	3.6	1518
27/07/2005	5	447	0.31	1713	0	615	20.6	1739	0.94	243	4.9	2333
28/07/2005	10.4	544	0.62	13	1.7	906	16.4	2035	0.92	1352	7.4	1523
29/07/2005	10.7	541	0.45	1504	0	1829	23	1446	0.94	2315	6.7	1534
30/07/2005	12.2	529	0.3	1510	0	3	25.8	1637	0.94	131	7.3	1508
31/07/2005	14.2	528	0.4	1909	0	933	25.8	1836	0.91	941	4	1654
01/08/2005	11.5	606	0.31	1641	0	417	30.7	1653	0.96	727	11.5	1816
02/08/2005	12.5	2353	0.43	1041	0.6	104	18.6	7	0.84	1441	9.8	1019
03/08/2005	12.3	18	0.32	1631	0.4	2318	21.8	1756	0.82	319	11.2	1140
04/08/2005	10.9	435	0.24	1513	0.1	2312	28.2	1511	0.81	435	8.7	1813
05/08/2005	14.9	523	0.34	1856	1.2	2351	25.5	1337	0.8	1528	11.9	1455
06/08/2005	10.8	537	0.32	1343	0	2155	25.6	1353	0.81	543	5.5	1504
07/08/2005	12.1	556	0.6	1619	0	1535	18.8	1358	0.95	613	6.3	102
08/08/2005	9.6	535	0.3	1749	0	217	19.1	1754	0.93	338	7.4	1801
09/08/2005	8.2	559	0.38	1350	0.6	1946	16.4	1805	0.89	501	7.1	1149
10/08/2005	9.5	349	0.37	1502	0.5	355	19.6	1456	0.9	2225	6.5	1438
11/08/2005	9.6	1017	0.61	1744	0.8	204	15	1737	0.93	216	8.7	1713
12/08/2005	6	555	0.41	1444	0.4	1437	16.4	1445	0.92	500	6.4	15
13/08/2005	9	616	0.56	1612	0.8	2153	18.1	1543	0.9	646	7.3	1724
14/08/2005	5.7	0	0.48	1538	0	230	13.7	1717	0.94	610	9.7	645
15/08/2005	4.2	307	0.68	1956	0	1128	13.2	1907	0.92	0	4.2	1433
16/08/2005	6.8	536	0.55	1502	0	0	15.6	1500	0.96	728	5.2	1348
17/08/2005	8.8	733	0.76	107	0	1	12.8	1635	0.95	819	6.9	1741
18/08/2005	9.7	2345	0.7	1647	1.8	2340	12.1	1634	0.94	220	9.5	1058
19/08/2005	8.7	555	0.72	1725	0	1516	13	1812	0.92	2353	4.3	27
20/08/2005	7.8	625	0.62	1611	0	53	19.8	1618	0.94	543	6.6	1713
21/08/2005	12	539	0.4	1525	0.9	0	27.5	1518	0.93	0	5.9	811
22/08/2005	12.5	634	0.32	1644	0.5	2245	21.8	1715	0.93	315	6.3	811
23/08/2005	9.8	653	0.4	1346	0	827	20.8	1447	0.87	446	9.1	1703
24/08/2005	8.4	711	0.33	1603	1.1	14	20.1	1723	0.94	247	6.6	1547
25/08/2005	6	644	0.24	1719	0	2157	25.6	1408	0.89	653	4.8	1306
26/08/2005	6.9	615	0.32	1737	0	6	27.1	1803	0.95	550	4.2	2054
27/08/2005	12.3	623	0.31	1834	0	1436	26.4	1511	0.77	623	4.4	2036
28/08/2005	11.8	340	0.29	1746	0.3	59	29.1	1712	0.89	721	8.4	1530
29/08/2005	8	0	0.62	1	0.9	249	20.5	1	0.97	2247	9.1	2304
30/08/2005	6.4	709	0.63	1848	0	1858	13.5	1845	1	555	7.7	30
31/08/2005	5.7	602	0.57	1540	0	534	18.6	1537	1	2359	5.5	1821
01/09/2005	5.5	635	0.47	1601	0	146	19.3	1453	1	223	6	1925
02/09/2005	7	311	0.61	1740	0	340	18.8	1735	1	318	7	1407
03/09/2005	8.5	338	0.44	1649	0	143	20.7	1605	0.99	718	4.6	2037

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date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
14/06/2005	14.2	0.82	3.1	186	3.3		13	624	195.9	160.6	11.16
15/06/2005	12.7	0.85	2.9	197	9.4		13	537	205.3	160.6	10.44
16/06/2005	12.7	0.63	4.7	268	0		13.1	538	205.3	160.6	16.92
17/06/2005	11	0.66	3.5	120	0		13	510	205.3	160.6	12.6
18/06/2005	13.3	0.55	3.5	95	0		13.1	509	205.3	160.6	12.6
19/06/2005	12.7	0.59	3.8	250	0		13	519	205.3	160.6	13.68
20/06/2005	18.7	0.26	2.6	168	0		13.1	2357	205.3	162.9	9.36
21/06/2005	18.7	0.55	3.3	155	0	9.4	12.9	458	205.3	167.6	11.88
22/06/2005	12.3	0.91	4.8	184	23.9	-0.5	12.9	512	229.2	167.8	17.28
23/06/2005	8.3	0.9	5.3	199	7.6	-0.1	13	727	236.8	168.1	19.08
24/06/2005	12.8	0.66	2.8	190	0	18.7	13.1	2359	236.8	174.6	10.08
25/06/2005	11.6	0.77	4.7	125	0.3	6	13	535	237.1	177.2	16.92
26/06/2005	13	0.57	2.7	217	0	14.1	13.1	545	237.1	182.6	9.72
27/06/2005	14.9	0.52	1.9	219	0	11.2	13	507	237.1	187.2	6.84
28/06/2005	14.3	0.71	2	269	5.1	2.9	13	510	242.2	188.8	7.2
29/06/2005	15.2	0.74	1.8	180	0.3	11.6	13	749	242.5	192.9	6.48
30/06/2005	19.1	0.53	1.6	179	0	15	13	508	242.5	198.9	5.76
01/07/2005	18.6	0.61	2.3	224	0.3	12.7	12.9	458	242.8	204.1	8.28
02/07/2005	16.6	0.71	2.3	219	20.3	8.4	12.9	527	263.1	207.5	8.28
03/07/2005	17.5	0.73	2.2	210	1.8	12.8	12.9	559	264.9	212.3	7.92
04/07/2005	20.3	0.53	3.6	208	0	18.5	12.9	548	264.9	220.3	12.96
05/07/2005	22.5	0.48	3	229	0	15.4	12.9	522	264.9	227.3	10.8
06/07/2005	19.2	0.77	1.7	233	10.9	7.8	12.8	534	275.8	230.4	6.12
07/07/2005	17.6	0.61	5	227	0.3	14.8	12.9	529	276.1	236.9	18
08/07/2005	20.7	0.42	3.5	230	0	16	12.9	521	276.1	244.5	12.6
09/07/2005	18.6	0.59	3.2	216	0.5	10.4	12.8	622	276.6	249.3	11.52
10/07/2005	17.3	0.56	3.2	243	0	11.1	12.9	521	276.6	254.3	11.52
11/07/2005	18.2	0.55	2.7	190	0	10.4	12.9	515	276.6	259	9.72
12/07/2005	20.4	0.49	1.8	161	0	13.1	12.9	522	276.6	264.6	6.48
13/07/2005	18.2	0.69	2.5	213	3	9.8	12.8	547	279.6	268.7	9
14/07/2005	18.9	0.61	3.5	256	0	12.8	12.9	649	279.6	274.3	12.6
15/07/2005	18.7	0.56	2.8	228	0	10.1	12.9	529	279.6	279	10.08
16/07/2005	16.6	0.77	2.8	239	0	5.1	12.9	606	279.6	281.3	10.08
17/07/2005	17.8	0.77	1.8	242	6.9	6.8	13	528	286.5	284	6.48
18/07/2005	16.5	0.82	2.4	195	18	6.1	12.9	549	304.5	286.4	8.64
19/07/2005	14.5	0.76	3.5	251	4.8	11.9	12.9	643	309.3	290.8	12.6
20/07/2005	15.8	0.64	2.5	182	0	13.4	13	604	309.3	296	9
21/07/2005	14.1	0.62	2.5	118	0	11.5	13	549	309.3	300.5	9
22/07/2005	16.5	0.72	3.7	122	0.5	9.3	12.9	610	309.8	304.4	13.32
23/07/2005	10.5	0.86	6.4	172	26.4	-0.1	12.9	805	336.2	305	23.04
24/07/2005	10.1	0.89	1.5	265	10.9	2.3	13.1	619	347.1	305.9	5.4
25/07/2005	11.1	0.86	2.5	218	4.3	4.5	13.1	543	351.4	307.6	9
26/07/2005	11.4	0.7	1.3	247	0	8.4	13	623	351.4	310.6	4.68
27/07/2005	13.4	0.64	1.8	196	0	14.1	13	545	351.4	315.6	6.48
28/07/2005	13.9	0.79	4	137	3	1.7	13	543	354.4	316.9	14.4
29/07/2005	16.7	0.79	2.2	158	1.8	10.9	13	549	356.2	320.8	7.92
30/07/2005	19.4	0.6	2.8	229	0	13.9	12.9	552	356.2	326.6	10.08
31/07/2005	18.9	0.66	1.7	195	3.6	10.7	12.9	630	359.8	330.9	6.12
01/08/2005	20.5	0.64	3.1	202	6.4	9.8	12.8	621	366.2	335.4	11.16
02/08/2005	15.6	0.63	4.2	232	1.8	9.4	12.9	621	368	339.8	15.12
03/08/2005	16.5	0.57	5.1	286	0	14	13	635	368	346.1	18.36
04/08/2005	19.5	0.54	2.7	215	0	9.1	12.9	609	368	350.6	9.72
05/08/2005	19.6	0.6	3.3	247	0.5	9.7	12.8	533	368.5	355.2	11.88
06/08/2005	18.7	0.57	1.9	195	0	9.3	12.9	604	368.5	359.3	6.84
07/08/2005	15.2	0.81	2.5	272	0.8	3.9	12.8	620	369.3	361.1	9
08/08/2005	13.8	0.67	2.8	279	0.5	9.4	13	617	369.8	364.8	10.08
09/08/2005	12.4	0.64	2.9	302	0	9.3	13	554	369.8	368.6	10.44
10/08/2005	13.7	0.69	2.7	244	3.3	8	13	644	373.1	371.9	9.72
11/08/2005	11.9	0.81	4	304	2.5	1.5	12.9	702	375.6	373	14.4
12/08/2005	11.5	0.71	2.2	267	0	7.3	13	559	375.6	375.8	7.92
13/08/2005	13.1	0.76	2.6	262	3.6	5.4	13	732	379.2	378	9.36
14/08/2005	10.3	0.72	3.4	291	3.3	9	13	650	382.5	381.4	12.24
15/08/2005	8.8	0.82	1.8	241	1.5	3	13.1	637	384	382.6	6.48
16/08/2005	10.6	0.81	1.9	168	0	4.6	13	705	384	384.3	6.84
17/08/2005	10.5	0.89	3.4	86	13.5	-0.5	13	809	397.5	384.5	12.24
18/08/2005	10.6	0.85	5.8	72	4.3	1.7	13	812	401.8	385.6	20.88
19/08/2005	10.6	0.83	1.7	229	0	2.8	13	650	401.8	386.8	6.12
20/08/2005	13.8	0.8	3.3	141	0	5.9	13	618	401.8	389.2	11.88
21/08/2005	17.7	0.73	3.3	188	5.3	8.9	12.9	628	407.1	393	11.88
22/08/2005	16.3	0.7	2.8	229	5.6	10.3	12.9	643	412.7	397.1	10.08
23/08/2005	14.7	0.71	1.9	183	0	6.9	12.9	635	412.7	399.9	6.84
24/08/2005	14.1	0.66	3.3	219	0	8.9	13	641	412.7	403.7	11.88
25/08/2005	14.5	0.6	2.1	228	0	8.8	12.9	636	412.7	407.3	7.56
26/08/2005	17.2	0.61	2.3	162	0	8.3	12.9	629	412.7	411	8.28
27/08/2005	19.6	0.54	1.9	189	0	8.4	12.8	627	412.7	415	6.84
28/08/2005	20.5	0.57	3.6	140	0	7.7	12.8	657	412.7	419.2	12.96
29/08/2005	13.5	0.81	5.2	178	5.6	2.9	12.8	634	418.3	420.9	18.72
30/08/2005	9.2	0.85	2.4	238	7.1	3.2	13	749	425.4	422.1	8.64
31/08/2005	11.1	0.84	2.2	173	4.6	5.2	13	644	430	424	7.92
01/09/2005	11.6	0.85	2	189	0.3	7.2	13	652	430.3	426.4	7.2
02/09/2005	12	0.88	2.2	208	1.8	2.9	13	840	432.1	427.6	7.92
03/09/2005	13.9	0.76	2	232	0	6	13	704	432.1	430	7.2

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
04/09/2005	6.9	515	0.33	1556	0.6	1959	19.8	1456	0.93	517	5.9	1246
05/09/2005	5.5	632	0.3	1250	0	2302	20.4	1734	0.95	635	6.6	1738
06/09/2005	5.8	622	0.28	1628	0	151	21.6	1620	0.93	630	6	1520
07/09/2005	5.7	643	0.34	1531	0.5	134	22.5	1338	0.92	629	6.5	1439
08/09/2005	9.8	0	0.43	1450	0.5	359	20.5	1445	0.93	2255	6.5	1317
09/09/2005	7.3	453	0.51	1356	0.7	1942	17.6	1332	0.99	405	5.7	1233
10/09/2005	8	144	0.63	1521	1.4	2133	13.5	1642	0.98	149	7.2	919
11/09/2005	6.2	741	0.49	1555	0	1738	14.7	1556	0.99	745	5.4	1624
12/09/2005	6.1	149	0.6	1329	0.6	550	12.4	1146	0.98	708	8.5	1718
13/09/2005	0.9	651	0.45	1706	0	1502	10.2	1600	0.99	847	5.9	2049
14/09/2005	1.2	2337	0.45	1709	0.3	129	10	1649	0.95	600	4.9	2240
15/09/2005	-1.9	605	0.32	1738	0	1736	11.9	1801	0.96	609	3.1	1606
16/09/2005	4	1	0.54	1252	0.5	249	11.2	1619	0.94	1502	5.2	1343
17/09/2005	3.4	714	0.34	1649	0.2	1944	18.5	1514	0.99	634	4.3	1417
18/09/2005	9.1	727	0.31	1558	0.1	2023	20	1558	0.78	13	5.7	1729
19/09/2005	8.7	2340	0.36	1445	0.2	2151	17.7	1449	0.74	2342	10.1	1512
20/09/2005	7.1	2355	0.4	1411	0.1	1717	16.5	1419	0.95	2224	9.3	1518
21/09/2005	4.6	634	0.69	1606	0	1246	10.9	1739	0.9	21	4.1	237
22/09/2005	3.7	403	0.56	1531	0	2113	12.6	1530	0.99	417	3.9	1852
23/09/2005	1.4	542	0.55	1227	0	2136	11.9	1318	1	505	7.5	1443
24/09/2005	4.1	738	0.48	1524	0.2	749	14.4	1523	0.9	138	4.5	308
25/09/2005	5.7	2348	0.31	1716	0.2	2335	16	1629	0.93	259	9.3	1715
26/09/2005	2.7	721	0.34	1544	0.6	1804	13.7	1414	0.78	657	6.6	1829
27/09/2005	-1.2	734	0.31	1747	0	1446	12.2	1734	0.92	729	4.4	1738
28/09/2005	-1.2	444	0.36	1756	0	452	13.6	1802	0.99	607	7.1	1543
29/09/2005	8.1	749	0.26	1559	0.2	1926	18.2	1558	0.75	749	6.4	1600
30/09/2005	0.6	2349	0.52	1738	0	1645	8.4	1649	0.81	2350	6.3	2038
01/10/2005	-2.6	738	0.61	1836	0	340	5.9	1352	0.95	746	6	1856
02/10/2005	-3	0	0.55	1732	1.1	2329	3.8	1515	0.91	729	6.1	1528
03/10/2005	-6.6	719	0.37	1631	0	1616	5.8	1617	0.94	730	3.6	2215
04/10/2005	-4.9	738	0.44	1737	0.9	1611	9.7	1652	1.01	343	4.7	2136
05/10/2005	0.2	818	0.33	1604	1.5	146	11.2	1606	0.91	752	8.4	1400
06/10/2005	2	512	0.38	1517	2.6	203	13.5	1512	0.72	511	7.5	1448
07/10/2005	3.5	649	0.5	1535	0.8	1215	12.3	1535	0.96	0	5.8	2142
08/10/2005	4.4	2340	0.52	1602	0	2233	12	1602	0.98	532	5.6	1406
09/10/2005	-0.6	759	0.3	1637	0	105	15.4	1628	0.99	341	5.8	2348
10/10/2005	7.7	440	0.44	550	0.1	429	12.6	1502	0.76	2351	6.6	58
11/10/2005	4.1	815	0.27	1557	0.8	240	14.9	1453	0.9	816	6.3	1553
12/10/2005	2.3	412	0.34	1553	0.5	2005	14.8	1622	0.79	427	7.9	931
13/10/2005	3.7	816	0.41	1705	0.3	544	14.1	1631	0.82	818	5.4	1600
14/10/2005	0.5	806	0.24	1701	0	1654	14.4	1609	0.8	807	4.4	958
15/10/2005	3.3	456	0.43	1438	0	403	11.6	1531	0.78	2312	10.7	1213
16/10/2005	-0.6	2351	0.47	1652	0.8	2054	7.8	3	0.79	40	8	334
17/10/2005	-1.8	2355	0.51	1612	0	219	4.2	1612	0.82	2225	6.8	1956
18/10/2005	-4.7	851	0.47	1550	0	2201	6.7	1543	0.97	349	4.6	2303
19/10/2005	-0.3	710	0.67	1621	0	2024	8.2	1621	0.97	916	5.2	606
20/10/2005	-1.4	2359	0.59	1622	0	710	5.7	1237	0.93	617	6.9	1459
21/10/2005	-3.9	819	0.33	1559	0	2207	7.8	1526	0.93	358	4.6	1417
22/10/2005	-4.8	607	0.27	1541	0	242	8.9	1524	0.93	437	7.6	1617
23/10/2005	-0.1	813	0.41	1536	0.1	2236	11.2	1557	0.71	741	5.7	615
24/10/2005	1.7	741	0.49	1557	0.1	758	11.7	1559	0.84	835	3.7	2207
25/10/2005	1	716	0.36	1542	1.4	401	16.3	1534	0.9	722	7.1	2030
26/10/2005	5.5	2358	0.26	1820	2	50	15.6	1435	0.74	903	8.3	1602
27/10/2005	0.1	851	0.26	1528	0.8	2151	11.7	1456	0.63	2316	6.7	1528
28/10/2005	-2.5	759	0.32	1520	0	200	11	1519	0.8	749	3.3	1609
29/10/2005	-1	656	0.59	1529	0	109	8.3	1524	0.84	2024	4.6	2157
30/10/2005	-0.8	0	0.47	1606	0.7	1827	8.8	1614	0.78	100	7.8	1453
31/10/2005	-4	900	0.51	1555	0.1	1247	5.1	1545	0.98	2248	6.8	1829
01/11/2005	-0.8	2248	0.84	1229	0	2107	0.8	2017	0.98	2343	5.4	25
02/11/2005	-1.3	552	0.77	1439	0	327	4.4	1440	1	608	3.9	2317
03/11/2005	-1.4	1059	0.85	1836	0.7	1734	2.1	1	0.99	737	5.1	2157
04/11/2005	0.3	2300	0.8	445	0	816	2.3	1535	0.99	2305	6	15
05/11/2005	-0.5	813	0.96	2352	0	1637	0.7	44	1.01	850	2.7	56
06/11/2005	-2.9	2030	0.83	1626	0	7	0.8	1317	0.99	312	2.8	613
07/11/2005	-2.8	850	0.83	548	0	1	1	1610	0.98	911	3.9	1342
08/11/2005	-2.5	247	0.71	2237	0.5	1552	1.3	1553	0.89	55	5	1316
09/11/2005	-4.9	527	0.65	1542	0	358	3.8	2053	0.94	538	6.2	1312
10/11/2005	0.5	435	0.32	2001	0	359	12.8	1502	0.92	437	9.4	1513
11/11/2005	-5.9	0	0.4	38	0.9	1042	6.2	2	0.7	1040	8	504
12/11/2005	-11	913	0.49	1616	0	509	-4.5	1508	0.85	916	5.2	6
13/11/2005	-13.3	418	0.73	13	0	422	-6.5	1520	0.96	2330	5	1037
14/11/2005	-20.2	0	0.65	1442	0.6	1543	-7.7	352	0.96	300	6.1	453
15/11/2005	-23.4	931	0.67	1430	0.8	2204	-15.2	1509	0.86	2010	4	2324
16/11/2005	-19	51	0.79	300	0.3	1425	-5.2	2354	0.94	1715	4.6	223
17/11/2005	-8.9	525	0.76	2102	0.2	404	5	2102	0.96	651	5.6	1103
18/11/2005	-2.7	2355	0.69	555	0.3	1739	7.6	1037	0.96	0	8.7	1127
19/11/2005	-2.6	32	0.49	1613	1	531	14.2	1534	0.96	1	8.6	1439
20/11/2005	-4.5	2256	0.49	1352	0.7	2223	10.1	125	0.94	910	10.3	1300
21/11/2005	-4.3	19	0.65	1346	0	137	2.6	2307	0.96	303	4.5	2006
22/11/2005	0.3	2359	0.52	1452	0.8	210	10.3	1756	0.93	0	6.2	2349
23/11/2005	-5.7	1722	0.76	1808	2.4	1014	0.3	3	0.97	1135	8.8	1732
24/11/2005	-5.2	26	0.82	2	0	1621	0.1	1517	0.99	1830	8.9	259

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date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
04/09/2005	13.1	0.67	2.6	239	0	7.7	12.9	712	432.1	433.1	9.36
05/09/2005	13	0.65	2.1	193	0.5	5.6	12.9	638	432.6	435.7	7.56
06/09/2005	13.6	0.63	1.9	198	0	5.7	12.9	641	432.6	438.2	6.84
07/09/2005	14.4	0.61	2.6	182	0	4.2	12.9	635	432.6	440.5	9.36
08/09/2005	14.4	0.72	2.5	227	0	3.4	12.9	742	432.6	442.3	9
09/09/2005	12	0.83	2.3	255	0	3.6	12.9	701	432.6	443.8	8.28
10/09/2005	10.6	0.83	4.2	163	0	4.4	12.9	752	432.6	445.6	15.12
11/09/2005	9.7	0.76	1.8	163	0	4.7	13	723	432.6	447.4	6.48
12/09/2005	8.9	0.81	3.3	270	1	0.9	13	742	433.6	448.2	11.88
13/09/2005	5.7	0.75	2.3	170	0	5.2	13	715	433.6	450.1	8.28
14/09/2005	5.3	0.75	2.9	134	0	2.4	13.1	721	433.6	451.2	10.44
15/09/2005	5	0.65	1.4	216	0	4.1	13.1	659	433.6	452.9	5.04
16/09/2005	7.5	0.76	2	169	0.3	2.3	13	752	433.9	453.9	7.2
17/09/2005	11.1	0.7	2	185	0	4.8	13	659	433.9	456	7.2
18/09/2005	13.9	0.56	2.5	209	0	4.9	12.9	712	433.9	458.6	9
19/09/2005	12.5	0.6	3.1	232	0	1.8	12.9	803	433.9	460.4	11.16
20/09/2005	10.4	0.7	2.8	198	2	1.4	13	750	435.9	461.6	10.08
21/09/2005	7.4	0.81	2.2	60	0	3.9	13	754	435.9	463	7.92
22/09/2005	7.3	0.85	1.4	234	0.3	2.6	13	748	436.2	464	5.04
23/09/2005	6.1	0.83	2.4	238	0.3	2.7	13	718	436.5	465	8.64
24/09/2005	9	0.71	2	194	0	2.4	13.1	728	436.5	466.3	7.2
25/09/2005	10.8	0.65	3.3	227	0.5	0.5	13	738	437	467.4	11.88
26/09/2005	7.8	0.6	3	213	0	1.8	13	723	437	468.9	10.8
27/09/2005	5.3	0.63	2	265	0	3	13	728	437	470.4	7.2
28/09/2005	6	0.7	3.1	193	0	-0.3	13	734	437	471	11.16
29/09/2005	12.2	0.52	3.1	246	0	1.9	13	734	437	472.9	11.16
30/09/2005	4.3	0.66	3.4	46	0	1	13.3	2359	437	474	12.24
01/10/2005	2.1	0.78	2.6	93	0	1.2	13.1	734	437	474.7	9.36
02/10/2005	1.1	0.76	3.9	166	0	1.4	13.1	833	437	475.5	14.04
03/10/2005	-0.6	0.7	1.5	211	0	0.7	13.2	726	437	476	5.4
04/10/2005	2.3	0.77	2.5	136	0	1.3	13.1	758	437	476.8	9
05/10/2005	5.1	0.64	4.5	136	0	1.6	13.1	753	437	478.2	16.2
06/10/2005	6.8	0.58	4.3	135	0	1.4	13.1	746	437	479.9	15.48
07/10/2005	7.3	0.7	3.1	151	0	1.6	13	826	437	481	11.16
08/10/2005	7.5	0.83	2.4	225	1	2	13	740	438	482	8.64
09/10/2005	6.7	0.68	2.5	176	0	1.7	13.1	749	438	483.1	9
10/10/2005	10.4	0.54	2.8	160	0	-0.6	13	815	438	484.1	10.08
11/10/2005	9	0.64	2.7	221	0	0.5	13	732	438	485.1	9.72
12/10/2005	8.2	0.56	3.2	143	0	-0.3	13	822	438	486.1	11.52
13/10/2005	9	0.61	2.2	222	0	0.2	13	824	438	487	7.92
14/10/2005	6.9	0.55	2.1	187	0	0.4	13	756	438	488	7.56
15/10/2005	8.1	0.59	3.7	141	0	-0.8	13	912	438	488.9	13.32
16/10/2005	4.2	0.64	3.6	249	0	-0.1	13	914	438	489.8	12.96
17/10/2005	0.8	0.68	2.1	135	0	0.3	13.1	920	438	490.3	7.56
18/10/2005	0.7	0.77	1.6	192	0	0.9	13.2	822	438	490.8	5.76
19/10/2005	3.5	0.82	2.1	176	0	0.3	13.1	827	438	491.2	7.56
20/10/2005	2.8	0.78	2.8	257	0	-1	13	852	438	491.4	10.08
21/10/2005	1.4	0.68	1.8	232	0	-1	13.1	808	438	491.6	6.48
22/10/2005	1.5	0.61	3.6	149	0	-0.4	13.1	807	438	492.3	12.96
23/10/2005	4.9	0.58	3.2	148	0	0	13.1	821	438	493.3	11.52
24/10/2005	6.3	0.68	1.7	144	0	-0.1	13	824	438	493.8	6.12
25/10/2005	8.6	0.63	3.8	135	0	-0.8	13	816	438	494.7	13.68
26/10/2005	9.7	0.5	4.3	180	0	-1.3	12.9	828	438	496	15.48
27/10/2005	5.5	0.43	2.8	210	0	-1.8	12.9	832	438	496.7	10.08
28/10/2005	3.4	0.56	1.6	152	0	-1	13	826	438	497.1	5.76
29/10/2005	2.7	0.73	2.1	164	0	-0.4	13.1	855	438	497.4	7.56
30/10/2005	3.6	0.66	3.3	225	0	-1.6	13.1	829	438	497.7	11.88
31/10/2005	-0.2	0.76	2.4	194	0	-1.7	13.1	830	438	497.7	8.64
01/11/2005	-0.3	0.9	2.6	82	0	0.1	13.1	1030	438	497.9	9.36
02/11/2005	1	0.92	1.6	181	0	0.5	13.1	900	438	498.1	5.76
03/11/2005	0.5	0.92	2.6	151	0	-0.6	13.1	942	438	498.1	9.36
04/11/2005	1.4	0.91	1.9	208	0	-0.3	13	2331	438	498.2	6.84
05/11/2005	0.1	0.99	1	278	0	-0.5	12.8	2359	438	498.1	3.6
06/11/2005	-0.7	0.95	0.9	235	0	-0.6	12.7	931	438	498	3.24
07/11/2005	-0.7	0.92	1.4	142	0	-0.4	13.1	958	438	498	5.04
08/11/2005	-1.2	0.82	2.2	174	0	-1.4	13.1	1028	438	497.9	7.92
09/11/2005	-1	0.79	3.2	154	0	-1.8	13.2	937	438	497.8	11.52
10/11/2005	5.6	0.65	3.1	184	0	-0.8	13.1	854	438	498.4	11.16
11/11/2005	0.5	0.56	4.2	255	0	-3.2	13	901	438	498.6	15.12
12/11/2005	-7.8	0.69	2	251	0	-3.3	13.2	907	438	498.3	7.2
13/11/2005	-9.4	0.9	2.2	175	0	-0.9	13.3	1000	438	498.2	7.92
14/11/2005	-12.4	0.83	3.1	267	0	-1.5	13.3	934	438	498.1	11.16
15/11/2005	-19.3	0.78	2	184	0	-3.6	13.4	908	438	497.7	7.2
16/11/2005	-11.3	0.88	2	184	0	-0.5	13.4	1016	438	497.7	7.2
17/11/2005	-3.2	0.9	2.8	143	4	-1	13.2	953	442	497.6	10.08
18/11/2005	2.8	0.82	3.4	159	0	-1.7	13.1	1046	442	497.6	12.24
19/11/2005	6.5	0.72	3.3	201	0	-2	13	912	442	497.7	11.88
20/11/2005	3.4	0.72	4.2	249	2	-3.3	12.9	936	444	497.6	15.12
21/11/2005	-0.4	0.81	1.7	170	0	-0.7	13.1	942	444	497.7	6.12
22/11/2005	6	0.7	2.8	204	0	-0.7	13.1	940	444	498.1	10.08
23/11/2005	-3.8	0.88	5.1	75	0	-0.7	13	1054	444	498.2	18.36
24/11/2005	-2.5	0.92	3	131	0	-1.2	13.2	1007	444	498.1	10.8

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
25/11/2005	-6.6	0	0.88	1822	0.6	1729	-2.2	1549	1	2120	5.7	130
26/11/2005	-8.6	924	0.84	1605	0	826	-1.5	1232	0.98	28	3.4	1911
27/11/2005	-9.4	421	0.76	1151	0	2	-3.8	1159	0.97	229	4.5	2304
28/11/2005	-10.1	2347	0.66	1251	1	2320	-6.6	136	0.86	2352	5.4	705
29/11/2005	-12.7	2336	0.77	1544	1.5	14	-9.9	10	0.9	955	5.4	1946
30/11/2005	-14.1	914	0.78	517	0	828	-11.7	1502	0.91	2025	3.1	7
01/12/2005	-12.3	2003	0.72	716	0	800	-10.9	1430	0.91	115	3.4	0
02/12/2005	-13.5	1841	0.69	1955	0.8	1836	-12.1	3	0.88	905	4.9	601
03/12/2005	-14.6	2123	0.71	132	0	1030	-13	34	0.9	1853	3	641
04/12/2005	-19.7	2354	0.76	1634	0	530	-14	1310	0.9	600	5.2	1943
05/12/2005	-24.4	1026	0.77	1542	0.3	1750	-18.2	1553	0.85	632	5.9	220
06/12/2005	-26.2	617	0.77	616	0.1	1042	-17.5	1547	0.85	2206	3.6	0
07/12/2005	-22.3	432	0.73	1638	1.3	1202	-4.5	2354	0.9	2351	5.2	1053
08/12/2005	-12.3	700	0.87	1143	0	2346	-4.6	30	0.97	41	6.7	508
09/12/2005	-6.4	1	0.82	2026	0.1	18	4.1	1357	0.97	29	6.6	446
10/12/2005	-0.8	411	0.73	850	0	1850	5.1	2341	0.93	52	5.6	1121
11/12/2005	-2.4	2356	0.63	1443	0	1848	5.3	37	0.92	2214	4.7	1238
12/12/2005	-3.7	1022	0.76	1428	0.8	2219	1.1	1427	0.94	938	6	735
13/12/2005	-7	2232	0.86	8	0	2249	0.2	8	0.99	318	5.8	1258
14/12/2005	-16.7	2334	0.86	1811	0.4	722	-3.3	627	0.98	512	6.3	1024
15/12/2005	-18.4	2348	0.83	1541	0	1426	-13.7	1428	0.91	605	4.6	1637
16/12/2005	-21.7	1049	0.83	1049	0	1155	-17.7	1449	0.88	5	5.5	1718
17/12/2005	-21.8	413	0.83	1212	1.5	406	-14.1	1815	0.88	2040	7.4	1022
18/12/2005	-15.5	321	0.75	1233	0.5	223	-5.7	1526	0.91	0	6.2	1318
19/12/2005	-11.2	617	0.89	535	0.1	1454	-3.6	1540	0.99	1727	3.8	2326
20/12/2005	-13.2	930	0.82	1420	0.5	835	-5.7	1	0.97	50	4	1227
21/12/2005	-11.4	6	0.8	1542	0.4	2105	4.6	2000	0.95	948	6	1542
22/12/2005	-4.3	1041	0.9	419	0	1622	0.8	32	0.99	1011	4.3	426
23/12/2005	-7.8	1147	0.94	50	0	2004	1.4	27	1	717	2.5	639
24/12/2005	-8.3	836	0.87	2336	0	232	0	0	0.99	1439	5.2	2213
25/12/2005	-3.3	1135	0.82	1316	0	1123	1.6	1700	0.99	2311	4.4	1
26/12/2005	-7.7	2314	0.79	1341	0	159	2	1326	1	2223	2.7	1448
27/12/2005	-7.5	238	0.96	306	0	9	-3.5	1917	0.99	1917	1.8	1002
28/12/2005	-3.8	915	0.99	50	0	1115	-1.9	1552	1	1606	1.9	704
29/12/2005	-4.5	2337	0.97	1612	0	557	-2.1	1440	1	4	3.6	2108
30/12/2005	-6.9	1225	0.97	1211	1	806	-4.4	152	0.99	240	6.2	2238
31/12/2005	-5.1	7	0.85	2248	1.4	2043	-2	2236	0.98	118	7.2	146
01/01/2006	-2.527	103	0.888	3	1.739	25	-0.921	1911	0.995	2341	5.761	610
02/01/2006	-2.45	2136	0.941	432	0	359	-0.816	428	1	1112	4.24	26
03/01/2006	-7.83	2336	0.839	1410	0	2	-1.571	549	0.988	52	4.479	1816
04/01/2006	-8.18	546	0.813	1331	0	653	-4.432	1322	0.964	2011	4.214	606
05/01/2006	-8.88	957	0.937	12	0	1420	-6.406	1412	0.978	511	4.335	1526
06/01/2006	-8.73	2357	0.84	1349	0	744	-5.827	503	0.976	418	4.292	2237
07/01/2006	-12.18	2358	0.867	2156	0	906	-8.28	1440	0.961	405	5.367	2148
08/01/2006	-12.68	454	0.864	112	0	647	-5.802	1714	0.973	1854	4.595	1306
09/01/2006	-13.67	615	0.914	653	0	952	-4.576	2135	0.983	2133	3.494	2251
10/01/2006	-10.26	912	0.882	130	0	934	-5.067	2	0.978	444	4.915	124
11/01/2006	-8.73	1116	0.953	1114	0.064	2307	-5.802	157	0.977	115	3.631	848
12/01/2006	-13.35	2104	0.906	1153	0	2213	-6.711	6	0.97	1	4.862	219
13/01/2006	-13.54	437	0.911	437	0	213	-10.55	1613	0.94	444	4.639	2347
14/01/2006	-12.21	4	0.924	4	0	2231	-7.66	1616	0.962	521	5.264	1043
15/01/2006	-12.36	1116	0.858	1409	0	24	-8.21	2	0.96	710	5.764	917
16/01/2006	-16.27	1005	0.69	1312	0	1308	-11.24	1521	0.937	656	2.194	726
17/01/2006	-13.59	1024	0.845	2245	0	2	-9.43	1806	0.931	1051	7.05	1204
18/01/2006	-17.26	0	0.807	1445	0.611	2332	-10.5	1	0.94	414	6.654	901
19/01/2006	-23.91	2347	0.686	1424	0	1331	-16.61	1335	0.901	29	3.691	555
20/01/2006	-28.34	703	0.758	702	0	435	-21.2	1550	0.853	1548	2.078	215
21/01/2006	-25.7	636	0.782	958	0	2357	-10.2	2348	0.913	2252	5.922	1734
22/01/2006	-10.77	117	0.733	1524	0.508	353	2.244	1523	0.932	130	6.92	1403
23/01/2006	-14.87	2359	0.457	1541	1.15	405	2.432	901	0.951	137	11.73	2054
24/01/2006	-20.21	916	0.702	155	0.015	1104	-14.06	2050	0.905	2345	6.079	20
25/01/2006	-16.37	334	0.807	1446	0	1117	-5.034	1854	0.948	2008	4.823	2103
26/01/2006	-21.18	2316	0.809	2052	0.16	1020	-14.53	1028	0.905	2	5.215	1610
27/01/2006	-25.18	830	0.705	1326	0	1235	-18.04	2215	0.86	140	5.338	2325
28/01/2006	-19.39	234	0.776	30	0	1402	-10.89	1416	0.921	2117	5.625	2312
29/01/2006	-13.64	819	0.79	1555	0	1625	-8.21	2015	0.92	15	5.202	29
30/01/2006	-19.26	2356	0.826	435	1	1	-12.26	1	0.907	800	8.51	1947
31/01/2006	-23.84	1008	0.724	1217	0	1111	-11.56	0	0.899	2059	6.012	111
01/02/2006	-13.74	951	0.765	1600	0.5	1722	-7.18	1559	0.925	2227	6.321	1233
02/02/2006	-11.44	34	0.731	1540	0.681	1539	-2.321	1540	0.96	2355	6.19	203
03/02/2006	-12.8	936	0.673	1629	0.559	1059	1.495	1628	0.969	238	4.028	1949
04/02/2006	-10.5	757	0.8	14	0	928	-3.93	7	0.977	655	5.018	2236
05/02/2006	-11.96	2315	0.852	1244	1.3	2046	-6.54	1	0.956	58	8.25	1436
06/02/2006	-17.14	915	0.786	1520	0	1514	-10.57	1518	0.935	641	3.487	17
07/02/2006	-14.13	1053	0.806	1405	0.799	14	-5.552	2332	0.94	655	8.2	2115
08/02/2006	-5.81	231	0.667	2225	0.34	1625	3.899	1635	0.967	1014	7.87	757
09/02/2006	-8.86	2333	0.324	1642	1.039	2344	1.416	126	0.746	225	10.32	719
10/02/2006	-14.08	919	0.495	2226	0	2324	-3.444	2136	0.9	814	6.434	2135
11/02/2006	-8.51	1001	0.477	1524	0	701	2.352	1523	0.769	828	6.359	2324
12/02/2006	-5.759	443	0.424	1330	0.742	2329	7.56	1703	0.727	443	5.983	253
13/02/2006	-12.68	2358	0.369	1401	0	138	5.253	648	0.907	2109	13.17	1005
14/02/2006	-22.51	936	0.484	1625	0	1043	-12.65	1	0.888	243	7.07	140



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date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
25/11/2005	-4.2	0.95	2.8	161	0	-2	13.2	1020	444	497.8	10.08
26/11/2005	-5.8	0.94	1.3	167	0	-3.3	13.2	922	444	497.1	4.68
27/11/2005	-6.9	0.88	1.5	241	0	-2.4	13.2	929	444	496.7	5.4
28/11/2005	-8.3	0.76	2.9	306	0	-1	13.2	1009	444	496.8	10.44
29/11/2005	-11.1	0.86	3.3	199	0	-0.7	13.3	1022	444	496.8	11.88
30/11/2005	-12.4	0.85	1.3	296	0	-1	13.3	940	444	496.7	4.68
01/12/2005	-11.5	0.83	1.1	256	0	-1	13.3	1041	444	496.7	3.96
02/12/2005	-12.8	0.77	2.8	148	0	-0.9	13.3	1106	444	496.7	10.08
03/12/2005	-13.9	0.86	1.3	160	0	-0.8	13.1	2345	444	496.6	4.68
04/12/2005	-15.3	0.85	1.8	177	0	-0.7	12.7	0	444	496.6	6.48
05/12/2005	-21	0.82	1.9	211	0	-1.1	12.6	1035	444	496.5	6.84
06/12/2005	-22.2	0.81	1.7	209	0	-2.7	13.3	942	444	496.2	6.12
07/12/2005	-14.7	0.81	2.9	162	0	-1.2	13.4	949	444	496.2	10.44
08/12/2005	-8.8	0.92	3	168	0	-0.4	13.3	1016	444	496.2	10.8
09/12/2005	2.4	0.91	3	252	7	-1.8	13.2	1028	451	495.9	10.8
10/12/2005	1.6	0.83	2.5	218	0	-2.6	13.1	951	451	495.6	9
11/12/2005	1.8	0.77	1.8	233	0	-3.8	13.1	954	451	495	6.48
12/12/2005	-1.3	0.87	2.4	173	0	-2.4	13.1	949	451	494.6	8.64
13/12/2005	-4	0.95	2.5	273	0	-0.4	13.1	1056	451	494.6	9
14/12/2005	-8.5	0.93	2.8	135	0	-1	13.1	1129	451	494.4	10.08
15/12/2005	-16	0.88	1.7	211	0	-1	13.2	1124	451	494.3	6.12
16/12/2005	-19.7	0.85	1.5	208	0	-2	13.1	1034	451	494.1	5.4
17/12/2005	-18.2	0.85	4	149	0	-1.8	13.3	1000	451	494	14.4
18/12/2005	-10.7	0.84	2.9	191	0	-3.1	13.4	1006	451	493.5	10.44
19/12/2005	-6.8	0.94	1.6	204	0	-0.5	13.3	1042	451	493.5	5.76
20/12/2005	-10	0.92	1.9	190	0	-2.8	13.2	1003	451	493	6.84
21/12/2005	-2.9	0.89	2.9	189	5	-2.6	13.3	1007	456	492.6	10.44
22/12/2005	-1.3	0.95	1.7	177	0	-2.2	13.1	1006	456	492.2	6.12
23/12/2005	-4.4	0.97	1.3	204	0	-0.9	13.1	1032	456	492	4.68
24/12/2005	-4.2	0.96	1.6	159	0	-1.6	13.2	1026	456	491.7	5.76
25/12/2005	-0.4	0.92	2.1	189	0	-2.3	13.2	1014	456	491.2	7.56
26/12/2005	-1.2	0.94	1.5	218	0	-2	13.1	1010	456	490.9	5.4
27/12/2005	-5.8	0.98	0.8	194	0	0	13.2	1044	456	490.9	2.88
28/12/2005	-2.7	1	0.8	228	0	-0.2	13.2	1039	456	490.8	2.88
29/12/2005	-3.4	0.99	1.3	170	0	-0.4	13.1	1100	456	490.8	4.68
30/12/2005	-5.3	0.98	2.8	156	0	-0.2	13.2	1057	456	490.7	10.08
31/12/2005	-3.5	0.94	4.1	140	0	-0.8	13.2	1056	456	490.7	14.76
01/01/2006	-1.722	0.931	3.875	136.8	0	-0.317	13.14	1030	456	0.060476904	13.95
02/01/2006	-1.873	0.983	1.675	187.5	0	-0.228	12.96	2340	456	0.028095247	6.03
03/01/2006	-3.536	0.935	1.962	187.7	0	-1.808	12.8	1049	456	-0.296545532	7.0632
04/01/2006	-7.02	0.924	1.224	201	0	-2.029	13.23	1007	456	-0.650968494	4.4064
05/01/2006	-7.27	0.964	1.923	174.5	0	-0.145	13.24	1052	456	-0.645643329	6.9228
06/01/2006	-6.918	0.925	2.093	254	0	-1.022	13.21	1008	456	-0.778033819	7.5348
07/01/2006	-9.14	0.926	1.765	189.6	0	-0.234	13.25	1043	456	-0.761542768	6.354
08/01/2006	-9.55	0.933	2.157	185.8	0	-0.935	13.28	1043	456	-0.880279277	7.7652
09/01/2006	-9.53	0.947	1.05	218.1	0	-1.104	13.25	1035	456	-1.057447036	3.78
10/01/2006	-7.48	0.955	1.469	189.6	0	-0.426	13.28	1032	456	-1.105768067	5.2884
11/01/2006	-6.973	0.967	1.651	174.8	0	-0.312	13.23	1022	456	-1.139590662	5.9436
12/01/2006	-11.27	0.932	2.275	110.8	0	-0.346	13.19	1150	456	-1.145607195	8.19
13/01/2006	-12	0.928	1.908	117.5	0	-0.141	13.33	1014	456	-1.117907155	6.8688
14/01/2006	-8.74	0.943	2.609	118.3	0	-0.467	13.31	1115	456	-1.149306453	9.3924
15/01/2006	-10.75	0.915	2.009	185.8	0	-0.399	13.25	1010	456	-1.154272281	7.2324
16/01/2006	-13.34	0.878	0.953	234.6	0	-1.332	13.33	1001	456	-1.32303353	3.4308
17/01/2006	-11.17	0.893	3.51	116.9	0	-0.463	13.38	1032	456	-1.290077387	12.636
18/01/2006	-14.31	0.874	2.715	185.9	0	-0.164	13.3	1021	456	-1.219815101	9.774
19/01/2006	-19.95	0.834	1.389	136.5	0	-2.322	13.39	1005	456	-1.486331696	5.0004
20/01/2006	-25.48	0.796	0.76	241.3	0	-1.515	13.5	954	456	-1.62371374	2.736
21/01/2006	-19.92	0.838	2.673	149.3	0	-1.198	13.55	938	456	-1.707934732	9.6228
22/01/2006	-2.631	0.85	3.132	219.3	0.508	-3.062	13.39	2358	456.508	-2.159501688	11.2752
23/01/2006	-1.599	0.765	5.214	231.3	1.016	-3.405	13.14	1006	457.524	-2.383381122	18.7704
24/01/2006	-16.58	0.818	2.148	155.3	0	-0.643	13.2	1008	457.524	-2.377613576	7.7328
25/01/2006	-12.03	0.892	1.634	210.1	0	-1.626	13.39	937	457.524	-2.595931082	5.8824
26/01/2006	-16.93	0.873	2.347	151.7	0	-0.899	13.33	1011	457.524	-2.659412908	8.4492
27/01/2006	-22.1	0.791	2.107	169.5	0	-0.704	13.45	1002	457.524	-2.669609188	7.5852
28/01/2006	-15.11	0.849	2.96	111.7	0	-0.025	13.49	955	457.524	-2.55622765	10.656
29/01/2006	-11.55	0.859	2.563	168.7	0	-0.078	13.36	1025	457.524	-2.445155417	9.2268
30/01/2006	-15.44	0.878	4.627	183.2	0	-0.488	13.32	952	457.524	-2.399518062	16.6572
31/01/2006	-19.55	0.83	2.05	208.1	0	-0.311	13.41	945	457.524	-2.364431354	7.38
01/02/2006	-10.48	0.865	3.233	154.6	0	-2.074	13.41	1009	457.524	-2.605722148	11.6388
02/02/2006	-7.56	0.876	3.083	145.9	0	-2.228	13.35	919	457.524	-2.901179841	11.0988
03/02/2006	-5.61	0.843	2.085	162.6	0	-3.226	13.28	912	457.524	-3.411298856	7.506
04/02/2006	-6.833	0.919	2.467	106.3	0	-1.093	13.22	912	457.524	-3.544220842	8.8812
05/02/2006	-8.51	0.924	4.324	206.4	0	-0.076	13.26	1002	457.524	-3.446826927	15.5664
06/02/2006	-12.91	0.888	1.346	81.5	0	-0.309	13.32	942	457.524	-3.434543078	4.8456
07/02/2006	-10.42	0.887	3.859	143.9	0	-1.176	13.38	933	457.524	-3.516375629	13.8924
08/02/2006	-1.841	0.848	4.183	180.8	1.27	-2.475	13.29	945	458.794	-3.778262932	15.0588
09/02/2006	-1.354	0.579	5.594	300.8	0.254	-2.34	13.15	911	459.048	-3.244018094	20.1384
10/02/2006	-8.59	0.715	2.654	203.4	0	-2.201	13.24	902	459.048	-3.370849158	9.5544
11/02/2006	-4.602	0.653	2.274	172.8	0	-2.374	13.29	856	459.048	-3.464128209	8.1864
12/02/2006	-0.398	0.595	2.783	222.1	1.016	-2.304	13.23	909	460.064	-3.336463582	10.0188
13/02/2006	-0.627	0.667	4.93	214.4	0	-0.357	13.14	951	460.064	-2.616813019	17.748
14/02/2006	-17.4	0.687	2.582	202.3	0	-3.204	13.16	901	460.064	-2.915773805	9.2952

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
15/02/2006	-27.85	2348	0.536	1557	1.013	516	-17.5	736	0.777	1001	9.88	1015
16/02/2006	-32.46	751	0.447	1729	0	1125	-20.38	1731	0.79	1152	5.117	2310
17/02/2006	-21.48	130	0.433	1504	0	2231	-10.16	1627	0.732	2320	5.339	19
18/02/2006	-14.06	8	0.621	1	0	24	-3.341	1610	0.93	2349	5.357	1552
19/02/2006	-14.33	2310	0.619	1932	0.358	1430	-2.502	1430	0.93	16	6.822	1527
20/02/2006	-14.3	946	0.901	938	0	231	-6.809	2301	0.957	2022	4.684	822
21/02/2006	-12.89	2358	0.576	1236	0	328	-2.854	1510	0.96	630	6.463	1713
22/02/2006	-17.78	708	0.674	1157	0	1153	-6.992	1755	0.941	2351	3.662	1013
23/02/2006	-18.47	2128	0.746	1600	0.42	436	-12.23	8	0.941	5	5.223	2347
24/02/2006	-18.87	0	0.713	1430	0	938	-12.96	1151	0.894	2025	4.387	2034
25/02/2006	-22.64	444	0.567	1412	0	1352	-14.01	1356	0.869	111	5.081	707
26/02/2006	-27.04	923	0.605	1752	0.165	910	-12.37	1641	0.846	27	4.769	1951
27/02/2006	-20.63	704	0.712	1303	1.295	1040	-11.39	1729	0.9	2112	11.96	1605
28/02/2006	-17.06	834	0.499	1706	0	1705	-6.617	1704	0.9	632	7.19	34
01/03/2006	-16.99	557	0.568	1742	1.918	2327	-10.32	1825	0.867	718	7.02	2045
02/03/2006	-21.45	903	0.572	1656	0.214	2059	-7.68	1540	0.869	458	4.43	2232
03/03/2006	-16.97	824	0.569	1734	0.201	1143	-4.948	1720	0.91	404	7.14	2034
04/03/2006	-10	2353	0.647	1743	2.001	409	-5.455	1628	0.92	724	6.811	1743
05/03/2006	-13.19	737	0.664	1740	0.89	1155	-3.418	1651	0.928	623	4.763	949
06/03/2006	-8.66	427	0.568	1542	0.448	1539	0.383	1605	0.882	435	5.212	148
07/03/2006	-10.72	650	0.439	1232	0	1127	4.27	1552	0.959	706	4.585	2137
08/03/2006	-6.509	749	0.496	1721	0.71	637	5.792	1721	0.948	752	7.55	2225
09/03/2006	-2.115	714	0.682	3	2.538	1917	3.016	4	0.895	739	7.81	316
10/03/2006	-5.709	2202	0.594	1720	1.24	48	-0.581	1615	0.855	148	8.83	2054
11/03/2006	-13.19	2352	0.647	1558	1.924	0	-4.72	131	0.853	1300	8.21	1046
12/03/2006	-18.77	751	0.452	1649	0	1112	-1.458	1504	0.903	504	3.946	15
13/03/2006	-16.37	858	0.471	1642	0.266	2207	-4.567	1641	0.878	839	5.875	944
14/03/2006	-17.44	907	0.586	2135	1.083	113	-5.33	2136	0.913	337	7.37	708
15/03/2006	-10.55	825	0.355	1605	2.811	1150	0.12	1716	0.72	529	8.68	359
16/03/2006	-10.99	857	0.413	1546	2.448	903	-1.441	1621	0.731	800	9.35	1352
17/03/2006	-10.02	931	0.585	1734	4.513	337	-2.655	1637	0.782	1000	11.05	1941
18/03/2006	-8.12	925	0.503	1543	0.038	2222	-2.321	1655	0.961	2358	10.33	511
19/03/2006	-5.227	712	0.733	1349	0	821	-1.313	1428	0.978	741	5.338	2144
20/03/2006	-3.623	527	0.592	1750	1.965	658	1.569	1752	0.871	19	7.41	2358
21/03/2006	-3.93	814	0.432	2342	2.097	1711	3.888	1747	0.779	815	8.79	2240
22/03/2006	-3.342	737	0.443	12	3.028	1612	3.779	1742	0.64	538	8.66	1254
23/03/2006	-4.516	613	0.502	1825	2.332	1948	5.623	1825	0.775	736	5.738	906
24/03/2006	-3.725	712	0.413	1929	2.223	716	6.669	1758	0.773	326	9.54	2220
25/03/2006	-2.321	909	0.472	1405	0.936	1343	4.851	1915	0.865	0	8.06	315
26/03/2006	0.068	725	0.863	1	0	514	2.422	5	1	840	4.662	30
27/03/2006	-2.419	2359	0.605	1550	0	718	4.373	1436	0.999	845	5.588	1323
28/03/2006	-4.586	0	0.398	1710	0	339	2.611	1710	0.799	1	6.053	931
29/03/2006	-7.93	631	0.284	1630	0	549	4.898	1848	0.856	527	6.336	2336
30/03/2006	-1.752	416	0.451	1634	1.372	723	9.85	1635	0.82	2317	6.208	1746
31/03/2006	-1.077	613	0.262	1545	0.291	1153	12.09	1553	0.856	851	6.612	1414
01/04/2006	-4.872	526	0.279	1742	0.021	42	2.382	6	0.958	624	7.65	529
02/04/2006	-7.01	632	0.179	1513	0	301	8.75	1826	0.813	707	5.7	2134
03/04/2006	0.017	511	0.287	1900	0.691	2154	15.2	1647	0.667	857	6.233	1559
04/04/2006	-0.034	657	0.305	1404	0	326	11.57	1723	0.747	855	4.394	1906
05/04/2006	0.743	558	0.328	1557	0	1424	13.93	1649	0.764	603	5.057	1916
06/04/2006	0.9	425	0.354	1521	0.028	429	11.55	1528	0.787	2332	8.26	1438
07/04/2006	3.505	2356	0.581	1626	1.904	332	13.35	1625	0.962	2357	6.935	1908
08/04/2006	-0.38	647	0.683	1936	0	1209	11.03	1829	1	719	6.991	2154
09/04/2006	1.805	739	0.496	1509	0.111	1450	13.88	1541	0.968	801	6.31	219
10/04/2006	2.989	701	0.321	1956	1.61	2125	13.68	1744	0.865	131	8.02	1749
11/04/2006	-0.794	607	0.46	1650	0.042	520	10.49	1646	0.915	609	7.28	2055
12/04/2006	-0.999	612	0.238	1629	0	2129	16.96	1627	0.801	639	10.34	2229
13/04/2006	2.908	703	0.22	1801	0.727	2124	12.58	1753	0.878	609	7.8	1348
14/04/2006	3.642	217	0.268	1728	0	910	15.3	1653	0.623	720	5.48	1007
15/04/2006	4.07	844	0.143	1752	0.433	2227	12.52	1525	0.937	849	6.569	1422
16/04/2006	-0.866	528	0.293	2	0	545	9.22	1655	0.964	2346	8.89	1747
17/04/2006	-0.613	601	0.141	1628	0	245	14.64	1509	0.986	613	6.182	1510
18/04/2006	1.518	615	0.134	1559	0.683	2322	17.67	1700	0.569	617	7.7	1251
19/04/2006	3.861	629	0.106	1326	0	340	20.02	1624	0.458	513	9.94	1528
20/04/2006	6.413	653	0.176	1601	0.015	1753	21.59	1545	0.526	2337	5.362	2247
21/04/2006	5.68	750	0.337	1422	1.842	616	17.97	1430	0.666	649	7.9	1954
22/04/2006	-0.747	1038	0.212	1858	0.964	415	8.6	1817	1	635	9.34	1559
23/04/2006	-2.313	605	0.19	1733	0.4	1618	17.09	1732	0.669	559	6.063	1325
24/04/2006	3.943	627	0.118	1643	0.225	826	23.07	1640	0.431	626	5.841	1447
25/04/2006	6.272	630	0.085	1853	0	230	25.42	1703	0.538	424	7.04	1643
26/04/2006	8.51	713	0.136	1718	0.008	54	23.16	1613	0.535	2351	7.02	2137
27/04/2006	5.539	629	0.262	1425	0.557	2226	18.17	1456	0.735	629	8	2004
28/04/2006	2.1	605	0.221	1056	0.026	2335	23.83	1603	0.868	557	10.2	1448
29/04/2006	11	2359	0.235	1726	0.057	1900	17.5	1133	0.496	746	6.78	1156
30/04/2006	6.102	806	0.22	1813	0.748	1328	15.47	1637	0.977	819	7.33	1747
01/05/2006	1.352	2246	0.583	1428	3.829	58	9.81	1427	0.978	2304	14.02	1742
02/05/2006	0.874	150	0.688	2250	1.713	2358	4.955	1724	0.983	152	12.53	1615
03/05/2006	-1.319	507	0.213	1903	0.008	1517	11.92	1736	0.857	427	5.931	2235
04/05/2006	3.779	416	0.231	1742	0.776	2334	18.4	1513	0.622	308	7.2	1437
05/05/2006	4.297	536	0.155	1455	0.493	1203	24.39	1459	0.784	538	6.724	1717
06/05/2006	6.578	546	0.197	1516	0	157	22.72	1454	0.706	508	7.6	1914
07/05/2006	7.01	631	0.14	1700	0.359	1117	20.8	1618	0.713	28	7.47	1401

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date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
15/02/2006	-21.82	0.664	4.597	166.2	0	-3.01	13.45	859	460.064	-3.096009261	16.5492
16/02/2006	-26.41	0.634	2.015	243.9	0	-2.692	13.53	902	460.064	-3.301301209	7.254
17/02/2006	-15.67	0.522	2.628	183.4	0	-1.135	13.56	844	460.064	-3.150912541	9.4608
18/02/2006	-8.87	0.774	1.834	241.7	0	-0.293	13.41	909	460.064	-3.012640708	6.6024
19/02/2006	-5.976	0.842	2.496	171.6	0	-0.584	13.28	913	460.064	-2.946774018	8.9856
20/02/2006	-10.64	0.927	1.858	182.9	0	0.158	13.31	912	460.064	-2.859839412	6.6888
21/02/2006	-8.19	0.82	1.602	230.6	0.762	-2.072	13.32	850	460.826	-3.120064404	5.7672
22/02/2006	-12.14	0.811	1.661	179.3	0	-1.731	13.37	855	460.826	-3.300927996	5.9796
23/02/2006	-14.85	0.865	2.545	173.4	0	-1.202	13.37	859	460.826	-3.402596289	9.162
24/02/2006	-16.09	0.847	1.881	148.8	0	-1.575	13.48	858	460.826	-3.567607904	6.7716
25/02/2006	-19.29	0.785	2.384	228.4	0	-1.73	13.47	848	460.826	-3.706719945	8.5824
26/02/2006	-19.74	0.743	2.35	151.8	0	-2.38	13.53	759	460.826	-3.918484833	8.46
27/02/2006	-15.45	0.83	4.942	124.4	0	-0.848	13.49	833	460.826	-3.873861976	17.7912
28/02/2006	-12.09	0.742	2.361	155.9	0	-2.365	13.41	823	460.826	-4.085984614	8.4996
01/03/2006	-13.84	0.764	4.451	99.4	0	-0.961	13.41	843	460.826	-3.989453808	16.0236
02/03/2006	-14.77	0.763	2.008	213.9	0	-2.125	13.43	822	460.826	-4.191375086	7.2288
03/03/2006	-11.16	0.776	3.423	121.6	0	-2.291	13.42	827	460.826	-4.369306493	12.3228
04/03/2006	-8.3	0.788	4.268	127.9	0	-0.906	13.34	833	460.826	-4.234596093	15.3648
05/03/2006	-8.71	0.822	2.779	138	0	-1.226	13.34	841	460.826	-4.279829626	10.0044
06/03/2006	-4.769	0.746	2.773	136.3	0.762	-1.048	13.32	829	461.588	-4.163330816	9.9828
07/03/2006	-2.913	0.723	1.816	151.5	0	-0.733	13.26	803	461.588	-4.003466558	6.5376
08/03/2006	0.245	0.728	3.367	133.8	0	-1.387	13.17	800	461.588	-3.811870049	12.1212
09/03/2006	-0.176	0.803	5.122	123.2	0	-1.045	13.11	809	461.588	-3.562152325	18.4392
10/03/2006	-2.454	0.747	4.249	72.3	0	0.379	13.19	823	461.588	-2.971251773	15.2964
11/03/2006	-7.44	0.77	5.077	107.6	0	0.171	13.25	802	461.588	-2.532153073	18.2772
12/03/2006	-10.97	0.731	1.619	171.4	0	-1.053	13.39	752	461.588	-2.532360447	5.8284
13/03/2006	-9.68	0.69	2.97	130.2	0	-1.485	13.35	744	461.588	-2.481153394	10.692
14/03/2006	-11.78	0.776	4.256	92	0	-0.838	13.35	747	461.588	-2.361066759	15.3216
15/03/2006	-5.259	0.565	6.01	124.7	0	-1.968	13.39	737	461.588	-1.807778824	21.636
16/03/2006	-6.064	0.588	5.553	122.9	0	-1.463	13.27	737	461.588	-1.281218953	19.9908
17/03/2006	-6.525	0.701	7.08	117.4	0	-0.054	13.29	806	461.588	-0.580695474	25.488
18/03/2006	-5.146	0.715	5.434	125.1	0	1.293	13.29	806	461.588	0.290438263	19.5624
19/03/2006	-3.185	0.9	2.403	152.8	1.016	-0.45	13.26	833	462.604	0.324004102	8.6508
20/03/2006	-1.295	0.724	3.916	151.3	0	0.106	13.25	808	462.604	0.898411735	14.0976
21/03/2006	-0.082	0.618	5.782	132.6	0	-0.579	13.21	730	462.604	1.824119208	20.8152
22/03/2006	0.159	0.557	5.478	133.7	0	1.72	13.19	735	462.604	3.43560385	19.7208
23/03/2006	0.486	0.643	3.825	134.7	0	1.167	13.17	728	462.604	4.476684743	13.77
24/03/2006	1.594	0.604	5.004	126.2	0	1.599	13.15	722	462.604	5.938930325	18.0144
25/03/2006	1.44	0.597	4.175	127.8	0	2.938	13.13	722	462.604	7.611629416	15.03
26/03/2006	1.11	0.979	1.425	191.4	6.35	-1.79	13.13	845	468.954	7.199360088	5.13
27/03/2006	1.529	0.832	1.745	275.9	2.032	-0.064	13.18	749	470.986	7.420267745	6.282
28/03/2006	-2.303	0.596	2.525	299.6	0	3.392	13.19	754	470.986	8.776871327	9.09
29/03/2006	-1.131	0.554	1.703	159	0	2.718	13.27	709	470.986	9.96474808	6.1308
30/03/2006	3.094	0.651	3.372	145.6	0	5.261	13.19	718	470.986	12.06757754	12.1392
31/03/2006	4.266	0.621	2.571	209.6	0	6.198	13.13	701	470.986	14.41626638	9.2556
01/04/2006	-1.69	0.557	3.052	105.3	64.3	6.317	13.12	645	535.286	16.61392641	10.9872
02/04/2006	1.076	0.425	2.341	156.7	0	6.688	13.23	703	535.286	19.17821945	8.4276
03/04/2006	7.01	0.464	2.984	184.5	0	8.64	13.11	714	535.286	22.80060904	10.7424
04/04/2006	6.339	0.512	2.038	108.2	0	6.784	13	657	535.286	25.53441528	7.3368
05/04/2006	6.409	0.564	2.579	75	0	8.05	13.05	718	535.286	28.63090115	9.2844
06/04/2006	5.607	0.576	4.706	118.4	0	5.528	13.04	648	535.286	31.39034984	16.9416
07/04/2006	6.817	0.81	4.178	137	0	4.259	13.04	727	535.286	33.10386565	15.0408
08/04/2006	4.231	0.924	3.027	126.2	0	5.514	13.09	742	535.286	34.70048553	10.8972
09/04/2006	6.946	0.798	2.924	156.7	0	5.507	13.06	728	535.286	36.67142175	10.5264
10/04/2006	7.82	0.537	3.562	252.5	0	8.84	13.03	634	535.286	40.37573677	12.8232
11/04/2006	4.662	0.678	2.948	111.4	0	9.22	13.05	622	535.286	43.48147376	10.6128
12/04/2006	7.83	0.544	3.634	108.3	0.762	5.88	13.11	628	536.048	46.36516971	13.0824
13/04/2006	7.82	0.536	3.587	221.9	0	7.96	12.96	643	536.048	49.83460578	12.9132
14/04/2006	8.99	0.457	2.465	139.1	0	5.341	13.05	707	536.048	52.56696009	8.874
15/04/2006	8.2	0.477	3.141	242.9	0.254	5.907	12.95	839	536.302	55.54053649	11.3076
16/04/2006	3.724	0.556	2.347	144.7	0	1.147	13.08	616	536.302	56.63661664	8.4492
17/04/2006	7.03	0.566	2.014	241.4	0	7.74	13.14	630	536.302	59.56881995	7.2504
18/04/2006	9.75	0.321	3.289	210.1	0	8.65	13.06	627	536.302	63.91111404	11.8404
19/04/2006	12.24	0.244	4.541	146.6	0	7.62	12.98	620	536.302	68.98203336	16.3476
20/04/2006	13.59	0.301	3.118	95.8	0	6.86	12.95	628	536.302	73.1596033	11.2248
21/04/2006	10.69	0.523	4.109	95	0	4.947	12.91	610	536.302	76.16708757	14.7924
22/04/2006	3.129	0.662	3.782	295.2	2.54	3.167	12.98	701	538.842	77.77222826	13.6152
23/04/2006	8.02	0.385	2.165	207.8	0	9.17	13.14	2349	538.842	81.56678379	7.794
24/04/2006	14.02	0.25	2.254	204.3	0	8.97	12.98	618	538.842	86.17978974	8.1144
25/04/2006	16.58	0.239	2.702	108.8	0	8.2	12.87	604	538.842	91.03972103	9.7272
26/04/2006	15.48	0.27	2.914	135	0	7.83	12.84	548	538.842	95.69083667	10.4904
27/04/2006	11.78	0.466	3.354	190.8	0	7.67	12.9	607	538.842	99.5414567	12.0744
28/04/2006	14.41	0.432	4.336	194.2	0	9.33	12.98	602	538.842	104.5709792	15.6096
29/04/2006	14.73	0.361	2.604	199	0	4.52	12.85	629	538.842	107.7426536	9.3744
30/04/2006	10.03	0.58	3.622	175.7	2.794	7.73	12.96	717	541.636	111.2033926	13.0392
01/05/2006	5.043	0.837	6.972	45.02	9.4	3.022	13.02	611	551.036	112.6517779	25.0992
02/05/2006	2.713	0.905	7.87	189.9	7.37	2.457	13.14	639	558.406	113.6534885	28.332
03/05/2006	5.315	0.549	2.548	183.5	0	12.71	13.2	605	558.406	117.931307	9.1728
04/05/2006	10.9	0.43	3.546	151.3	0	11.15	13.08	657	558.406	122.883883	12.7656
05/05/2006	14.79	0.44	2.924	172.6	0	9.42	12.98	600	558.406	127.4501895	10.5264
06/05/2006	15.4	0.429	2.835	224.4	0	8.93	12.87	544	558.406	131.9185489	10.206
07/05/2006	14.72	0.375	2.842	248.6	0	11.73	12.92	614	558.406	137.3478898	10.2312

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
08/05/2006	7.21	530	0.404	1529	0	415	17.84	1132	0.995	2250	9.85	1621
09/05/2006	6.385	649	0.765	1838	1.223	19	10.84	1816	0.983	2	5.597	111
10/05/2006	5.82	639	0.458	1913	0	454	16.09	1914	1	759	3.458	142
11/05/2006	7.64	611	0.274	1535	0.013	1107	19.11	1631	0.929	528	6.249	1324
12/05/2006	6.896	549	0.216	1428	0	547	20.25	1607	0.864	550	9.66	1705
13/05/2006	10.6	2333	0.159	1548	0	2315	20.37	1504	0.809	0	12.44	1747
14/05/2006	6.498	606	0.353	1512	0.047	1259	16.64	1540	0.949	611	9.06	1610
15/05/2006	7.44	343	0.123	1604	0	751	22.74	1656	0.95	300	7.38	1711
16/05/2006	7.27	531	0.15	1756	0.015	828	22.87	1802	0.592	531	6.96	2008
17/05/2006	12.84	623	0.262	1801	0.733	1602	26.46	1741	0.536	2217	7.04	1155
18/05/2006	8.59	529	0.145	1704	0	18	23.66	1418	0.862	533	9.18	1818
19/05/2006	6.63	628	0.303	1948	0.964	536	15.59	1819	0.969	648	8.72	1710
20/05/2006	4.245	548	0.345	1645	2.535	2000	11.68	1500	0.766	2000	9.37	1347
21/05/2006	5.399	437	0.64	12	2.229	1637	15.57	1941	0.96	606	8.29	37
22/05/2006	10.44	324	0.214	1853	0.033	1231	25.26	1738	0.94	327	8.81	419
23/05/2006	8.73	546	0.444	1444	2.67	1120	17.02	1502	0.777	553	9.11	2218
24/05/2006	7.55	2356	0.655	11	1.594	553	11.79	1	0.977	650	7.69	8
25/05/2006	6.748	418	0.711	1946	0	722	11.37	1917	0.995	428	3.809	1949
26/05/2006	6.917	2348	0.592	1348	0	535	13.36	1609	0.985	2357	6.336	1714
27/05/2006	2.557	508	0.251	1802	0	1751	17.36	1650	1	325	3.778	1615
28/05/2006	6.121	443	0.249	1532	0.034	2127	19.53	1753	0.823	449	5.161	1149
29/05/2006	7.59	340	0.274	1431	0	644	20.29	1355	0.81	343	8.47	1918
30/05/2006	6.658	413	0.434	1459	0.652	2354	15.25	1501	0.876	155	6.145	1029
31/05/2006	6.83	313	0.249	1911	0	24	22.99	1914	0.906	621	9.23	1443
01/06/2006	11.08	518	0.175	1532	0	1733	29.19	1440	0.787	517	6.187	1333
02/06/2006	13.03	518	0.199	1233	0	1551	30.28	1459	0.742	512	4.952	648
03/06/2006	12.36	2245	0.513	1926	0	621	21.99	1	0.929	1246	11.25	1723
04/06/2006	10.84	234	0.188	1602	1.349	2234	23.16	1743	0.707	153	12.79	1531
05/06/2006	10.17	521	0.233	1511	0.292	2107	24.13	1601	0.768	0	10.59	1746
06/06/2006	3.124	507	0.437	1611	0.381	1230	13.68	1650	0.931	512	5.862	36
07/06/2006	5.009	550	0.361	1913	0	348	18.78	1928	0.93	653	4.39	1355
08/06/2006	11.43	454	0.264	1651	1.071	2323	22.97	1343	0.608	333	8.52	1451
09/06/2006	10.11	0	0.539	416	0	1734	16.01	2	0.942	827	6.141	2233
10/06/2006	8.48	340	0.582	1459	0	1233	16.99	1637	0.959	517	6.804	2324
11/06/2006	8.35	609	0.497	1851	1.607	2130	16.49	1900	0.968	358	7.18	416
12/06/2006	9.99	431	0.337	1744	0	554	21.65	1743	0.926	452	5.547	1639
13/06/2006	10.93	445	0.31	1719	0.023	139	26.3	1701	0.846	449	6.37	1507
14/06/2006	16.91	510	0.281	1451	1.161	621	30.66	1734	0.695	629	5.869	1507
15/06/2006	15.6	452	0.264	1449	0	642	30.07	1750	0.842	448	5.179	1538
16/06/2006	17.41	508	0.338	1645	0	141	27.8	1625	0.759	2345	6.76	2016
17/06/2006	15.46	511	0.346	1644	0	2311	27.99	1647	0.954	2345	7.32	1943
18/06/2006	16.22	532	0.463	1628	0	1007	26.6	1625	0.991	458	4.65	1653
19/06/2006	14.87	0	0.617	1918	0.082	1040	21.39	1939	1	1049	5.049	1526
20/06/2006	10.57	452	0.516	1647	0.054	1145	23.45	1704	0.951	2352	7.73	1732
21/06/2006	12.26	550	0.757	1658	0.848	2011	17.7	1645	0.974	1129	5.674	4
22/06/2006	10.6	537	0.219	1747	0.413	723	25.37	1722	0.967	522	5.844	1509
23/06/2006	11.06	456	0.245	1338	0	53	24.9	1337	0.886	451	6.899	1506
24/06/2006	10.38	454	0.181	1447	0.644	1008	27.2	1806	0.788	456	7.61	1502
25/06/2006	14.93	512	0.201	1629	0.044	2354	25.64	1558	0.544	601	7.76	1437
26/06/2006	10.78	519	0.231	1903	0	220	28.99	1733	0.87	523	4.983	1822
27/06/2006	17.37	543	0.148	1702	1.41	222	35.06	1715	0.66	532	8.35	1702
28/06/2006	18.74	455	0.334	1851	0	518	29.39	1817	0.812	2355	5.101	1541
29/06/2006	15.31	0	0.127	1621	0.874	238	23.87	1707	0.809	3	8.73	1516
30/06/2006	11.55	439	0.262	1322	0.712	2043	25.3	1413	0.744	0	9.09	1226
01/07/2006	12.52	442	0.26	1512	1.214	2309	23.16	1519	0.854	133	9.08	1418
02/07/2006	9.39	420	0.343	1951	0.661	936	21.77	1702	0.916	422	6.373	1500
03/07/2006	9.18	457	0.239	1637	0	24	27.9	1657	0.885	459	4.738	1547
04/07/2006	16.47	505	0.167	1610	0	2321	33.88	1448	0.76	625	7.27	2217
05/07/2006	14.26	614	0.393	1537	0	338	27.52	1550	0.909	2047	9.69	1810
06/07/2006	19.26	0	0.442	1546	0.622	2122	24	1345	0.781	2124	4.188	1301
07/07/2006	13.71	2104	0.753	126	0.59	12	19.19	1	0.992	1323	4.987	245
08/07/2006	12.71	436	0.602	1825	0	1649	20.14	1904	0.981	129	7.35	721
09/07/2006	13.45	431	0.372	1544	0	430	26.61	1535	0.95	609	5.813	1634
10/07/2006	13.35	245	0.597	1513	0.01	1	22.19	1510	1	258	9.9	1654
11/07/2006	11.92	652	0.799	1946	0.938	1010	15.4	1442	0.998	904	6.697	1741
12/07/2006	8.15	500	0.453	1634	0.109	1702	20.84	1633	0.973	506	4.915	1114
13/07/2006	11.42	539	0.482	1322	0	56	21.91	1306	0.976	2358	3.683	1643
14/07/2006	11.18	534	0.298	1604	0.276	2122	24.04	1540	0.99	46	9.41	1855
15/07/2006	11.06	607	0.284	1302	0	708	24.86	1450	0.955	1	7.07	1615
16/07/2006	11.33	550	0.332	1842	0.593	2244	25.7	1827	0.908	744	6.13	1426
17/07/2006	13.35	500	0.233	1439	0.503	309	27.2	1608	0.899	500	7.86	1720
18/07/2006	11.04	559	0.55	1258	0	502	22.78	1248	0.984	725	8.41	1311
19/07/2006	11.82	441	0.308	1859	0.067	1853	25.92	1856	0.988	45	3.966	1607
20/07/2006	12.55	540	0.256	1744	0	12	29.18	1729	0.857	548	7.3	1527
21/07/2006	15.47	418	0.284	1723	0.544	2253	30.72	1507	0.763	406	5.89	1742
22/07/2006	17.79	348	0.229	1617	0	419	34.32	1413	0.727	314	7.26	1916
23/07/2006	16.72	520	0.286	1403	0.016	1645	30.11	1646	0.759	508	4.604	2308
24/07/2006	17.2	747	0.346	2003	0	900	26.92	2006	0.923	425	5.522	656
25/07/2006	14.79	2356	0.447	1426	0.003	129	26.63	1508	0.831	1610	7.73	1544
26/07/2006	11.95	720	0.78	38	1.56	1014	14.73	1	0.989	2222	5.408	2247
27/07/2006	11.11	721	0.417	1704	0.057	1712	20.01	1759	0.993	657	5.166	737
28/07/2006	9.54	540	0.322	1439	0	818	22.83	1622	0.958	434	3.695	1922

## MLSB Coke Watershed Meteorological Station Data

date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
08/05/2006	11.51	0.742	2.977	143.5	11.68	1.382	12.95	545	570.086	138.4620013	10.7172
09/05/2006	8.42	0.922	3.159	158.4	0.508	1.484	12.97	653	570.594	139.0770431	11.3724
10/05/2006	10.92	0.764	1.511	177.9	0.254	9.85	13.06	642	570.848	142.3786466	5.4396
11/05/2006	13.77	0.588	2.36	155.9	0	12.03	13.01	533	570.848	147.0712203	8.496
12/05/2006	14.58	0.474	4.193	130.8	0	11.62	12.95	550	570.848	152.6069676	15.0948
13/05/2006	14.37	0.459	4.586	141.9	0	7.75	12.94	547	570.848	157.1318285	16.5096
14/05/2006	11.56	0.726	2.22	172.1	2.286	6.686	12.99	556	573.134	159.7264752	7.992
15/05/2006	14.98	0.495	2.849	213.5	0	12.92	13.04	539	573.134	165.1922551	10.2564
16/05/2006	15.84	0.334	2.366	142.3	0	11.15	12.94	527	573.134	170.4715841	8.5176
17/05/2006	18.98	0.383	3.598	108	0	7.32	12.9	558	573.134	175.1962405	12.9528
18/05/2006	17.02	0.481	3.676	252.7	0	12.71	12.85	513	573.134	181.1157184	13.2336
19/05/2006	11.55	0.612	4.552	109.9	0	9.14	12.91	513	573.134	185.2092918	16.3872
20/05/2006	8.13	0.544	6.126	122.4	1.27	3.277	13.04	512	574.404	187.9679722	22.0536
21/05/2006	9.32	0.858	4.909	134.1	10.67	4.044	13.04	659	585.074	189.6218769	17.6724
22/05/2006	17.49	0.61	3.018	177	0	14.63	13.01	2353	585.074	195.5368027	10.8648
23/05/2006	13.13	0.601	5.384	82.2	0	8.65	12.87	515	585.074	199.8564922	19.3824
24/05/2006	8.92	0.893	3.497	196.3	4.826	0.111	12.96	622	589.9	200.1866373	12.5892
25/05/2006	8.77	0.876	1.763	124.9	0	3.539	13.11	628	589.9	201.4134265	6.3468
26/05/2006	9.57	0.829	2.278	136.2	0.508	4.263	13.06	654	590.408	203.002824	8.2008
27/05/2006	10.83	0.613	1.516	203.5	0	12.73	13.13	458	590.408	207.4179172	5.4576
28/05/2006	13.23	0.493	2.412	143.1	0	9.25	13.03	533	590.408	211.4902208	8.6832
29/05/2006	14.07	0.551	2.532	178	0	11.28	12.98	533	590.408	216.1230717	9.1152
30/05/2006	11.23	0.628	3.099	288.1	0	9.36	13.01	542	590.408	219.8909254	11.1564
31/05/2006	15.79	0.527	2.011	165.9	0	11.2	13.05	2352	590.408	224.5449025	7.2396
01/06/2006	20.89	0.436	2.472	156.6	0	11.15	12.9	514	590.408	230.0045342	8.8992
02/06/2006	22.84	0.413	2.156	146.5	0	9.12	12.83	509	590.408	234.8705027	7.7616
03/06/2006	16.35	0.67	5.099	205.2	1.27	7.19	12.8	506	591.678	238.6228806	18.3564
04/06/2006	17.53	0.396	5.879	215.9	0	14.03	13.03	506	591.678	246.2330659	21.1644
05/06/2006	16.2	0.477	2.944	251.2	0	10.53	12.92	501	591.678	251.1557661	10.5984
06/06/2006	9.39	0.66	2.74	238.6	0.254	7.28	13.02	513	591.932	254.0488923	9.864
07/06/2006	12.97	0.561	1.834	136.6	0	8.59	13.06	502	591.932	257.5797307	6.6024
08/06/2006	17.25	0.448	4.187	137.8	0	9.49	12.98	502	591.932	262.8196718	15.0732
09/06/2006	12.78	0.807	2.461	208.5	3.302	1.718	12.93	607	595.234	263.8250303	8.8596
10/06/2006	11.78	0.816	3.022	141	0	4.83	13.06	531	595.234	265.7592939	10.8792
11/06/2006	11.78	0.761	4.165	132.6	0.254	7.23	13.05	530	595.488	268.7096284	14.994
12/06/2006	16.05	0.618	2.331	164.8	0	12.01	13.02	539	595.488	273.4854814	8.3916
13/06/2006	19.5	0.518	3.468	144.3	0	10.85	12.92	453	595.488	278.8257326	12.4848
14/06/2006	23.65	0.475	3.283	140.8	0	11.61	12.86	519	595.488	284.8552278	11.8188
15/06/2006	23.94	0.471	2.155	155.7	0	10.78	12.78	505	595.488	290.1724237	7.758
16/06/2006	23.21	0.519	2.481	169.2	0	10.76	12.8	513	595.488	295.405279	8.9316
17/06/2006	20.79	0.707	2.162	180.4	14.48	8.63	12.82	527	609.968	299.1007543	7.7832
18/06/2006	20.4	0.778	1.846	237.3	0	12.82	12.84	502	609.968	303.8857629	6.6456
19/06/2006	17.73	0.853	1.849	225.3	10.92	5.574	12.88	546	620.888	306.024723	6.6564
20/06/2006	16.54	0.798	2.752	259.6	6.35	12.01	12.95	458	627.238	310.3952347	9.9072
21/06/2006	14.32	0.885	2.489	272.1	2.032	2.623	12.94	558	629.27	311.5029977	8.9604
22/06/2006	18.72	0.593	2.289	249	0	16.56	13	532	629.27	317.9936244	8.2404
23/06/2006	18.74	0.534	2.231	264.9	0.508	12.66	12.91	502	629.778	323.3874232	8.0316
24/06/2006	19.81	0.449	2.582	227.2	0	12.15	12.93	502	629.778	329.0879504	9.2952
25/06/2006	21.07	0.378	3.399	258.1	0	15.34	12.84	457	629.778	336.5528573	12.2364
26/06/2006	21.41	0.468	2.18	185.6	0	13.23	12.88	506	629.778	342.5202792	7.848
27/06/2006	26.6	0.407	4.298	146.4	0	12.26	12.8	525	629.778	349.7950915	15.4728
28/06/2006	24.51	0.531	2.465	210.2	0	10.7	12.76	532	629.778	355.0476142	8.874
29/06/2006	19.55	0.344	4.028	250.8	0	10.5	12.79	609	629.778	361.203317	14.5008
30/06/2006	18.53	0.43	3.938	256.7	0	10.83	12.9	508	629.778	366.9691802	14.1768
01/07/2006	17.17	0.598	3.918	219.6	0	10.02	12.92	533	629.778	371.6863378	14.1048
02/07/2006	17.18	0.566	2.62	147.9	0	13.77	12.93	458	629.778	377.3309779	9.432
03/07/2006	20.01	0.49	1.676	173.5	0	11.13	12.92	506	629.778	382.2511719	6.0336
04/07/2006	24.29	0.473	2.629	140.3	0	8.29	12.82	453	629.778	386.9402026	9.4644
05/07/2006	20.39	0.667	4.362	138.7	0.762	6.163	12.78	506	630.54	390.462191	15.7032
06/07/2006	21.49	0.647	2.021	239.8	0	2.257	13.01	2357	630.54	392.230884	7.2756
07/07/2006	16.33	0.932	2.631	238.2	3.556	-0.099	12.84	636	634.096	392.4004735	9.4716
08/07/2006	16.27	0.834	2.955	194.4	2.794	5.531	12.96	729	636.89	394.6482105	10.638
09/07/2006	19.05	0.717	2.464	179.1	0	10.03	12.93	534	636.89	398.7387961	8.8704
10/07/2006	17.14	0.83	4.582	89	19.05	3.455	12.92	513	655.94	400.5621228	16.4952
11/07/2006	13.4	0.925	3.718	187.3	43.18	3.24	12.83	759	699.12	401.7879869	13.3848
12/07/2006	15.01	0.711	2.217	231.1	0	14.86	13.03	508	699.12	407.0926645	7.9812
13/07/2006	16.91	0.761	1.347	206.4	2.032	8.89	12.94	534	701.152	410.3955552	4.8492
14/07/2006	16.45	0.727	2.921	213.8	0.254	15.8	12.95	525	701.406	416.1904108	10.5156
15/07/2006	16.51	0.697	2.373	207.6	3.81	13.21	12.96	531	705.216	421.165565	8.5428
16/07/2006	18.03	0.677	2.636	258.4	0.254	12.86	12.99	549	705.47	426.2549923	9.4896
17/07/2006	20.27	0.563	3.295	218.7	0	14.64	12.89	513	705.47	432.6651429	11.862
18/07/2006	16.23	0.8	2.039	249.6	1.778	8.25	12.88	534	707.248	435.7455255	7.3404
19/07/2006	19.09	0.625	1.642	231.7	0.254	15.73	12.95	519	707.502	441.7364207	5.9112
20/07/2006	21.61	0.54	2.011	221.5	0	14.4	12.85	530	707.502	447.8303527	7.2396
21/07/2006	23.43	0.503	2.738	243.7	0	13.68	12.79	537	707.502	454.2144207	9.8568
22/07/2006	25.37	0.479	2.568	243.1	0	15.4	12.79	505	707.502	461.3570657	9.2448
23/07/2006	23.58	0.534	1.708	200.7	1.016	10.26	12.76	537	708.518	466.1134089	6.1488
24/07/2006	21.62	0.63	1.756	201.4	1.778	9.71	12.74	711	710.296	470.3257702	6.3216
25/07/2006	18.95	0.711	3.012	156.5	0.508	7.01	12.8	545	710.804	473.5696025	10.8432
26/07/2006	12.86	0.922	3.512	47.48	7.11	-0.709	12.88	650	717.914	473.6068194	12.6432
27/07/2006	14.61	0.779	2.381	126.3	0.762	11.55	12.9	725	718.676	477.7186131	8.5716
28/07/2006	16.97	0.638	1.531	185.5	0	12.58	12.95	545	718.676	482.4919343	5.5116

MLSB Coke Watershed Meteorological Station Data

date	minairtemp	timeminairtemp	minRH	timeminRH	minwindsp	timeminwindsp	maxairtemp	timemaxairtemp	maxRH	timemaxRH	maxwindsp	timemaxwindsp
29/07/2006	14.01	528	0.559	122	0.307	2358	19.14	1552	0.892	308	5.205	802
30/07/2006	11.32	502	0.792	1	0	345	14.73	1	0.993	505	5.38	1305
31/07/2006	9.07	532	0.651	1110	0.487	723	17.11	943	0.987	353	6.492	1111
01/08/2006	6.3	521	0.501	1240	0.018	223	16.89	1249	0.982	534	6.623	1724
02/08/2006	5.595	410	0.442	1549	0	901	19.45	1553	0.988	444	5.416	1814
03/08/2006	8.42	544	0.512	1409	0.808	2130	17.21	1344	0.956	558	5.978	1219
04/08/2006	10.87	330	0.524	1738	0	2055	18.59	1918	0.986	407	4.996	1449
05/08/2006	7.44	526	0.452	1901	0	2127	20.41	1917	1	609	5.044	1537
06/08/2006	10.2	442	0.345	1920	0.198	2249	23.74	1933	0.959	629	5.143	1318
07/08/2006	12.52	633	0.298	1707	0	643	26.53	1549	0.89	635	5.579	102
08/08/2006	14.34	557	0.589	1640	0	203	22.63	1646	0.97	554	5.989	426
09/08/2006	16.54	0	0.379	1622	0	353	25.12	1500	0.948	711	5.642	10
10/08/2006	10.69	505	0.27	1433	0.64	2122	24.38	1619	0.811	505	5.759	1313
11/08/2006	9.27	520	0.456	1825	0	637	20.18	1715	0.949	527	3.956	2050
12/08/2006	10.9	619	0.347	1652	0	2310	22.7	1358	0.933	611	8.46	1506
13/08/2006	9.1	558	0.305	1546	0	341	25.75	1635	0.957	601	5.705	1734
14/08/2006	12.52	554	0.287	1345	0.412	304	26.19	1338	0.888	552	7.42	1459
15/08/2006	11.67	2355	0.584	1353	0.011	1624	18.81	1233	0.984	241	7.73	1404
16/08/2006	9.81	634	0.486	1726	0.908	2245	20.45	1726	0.969	446	6.403	1422
17/08/2006	7.92	721	0.488	1337	0	1025	21.39	1738	0.99	549	3.35	1806
18/08/2006	13.35	619	0.284	1433	0	431	29.34	1428	0.926	444	7.92	2131
19/08/2006	11.03	655	0.336	1427	0.709	100	22.92	1426	0.934	602	8.34	1740
20/08/2006	9.15	630	0.346	1846	0	1837	22.09	1846	0.967	637	4.111	1013
21/08/2006	9.36	555	0.29	1523	0	431	26.02	1740	0.932	616	5.532	1449
22/08/2006	13.98	630	0.271	1537	0.751	57	29.49	1534	0.832	629	6.146	1439
23/08/2006	12.14	2353	0.575	1	0	344	20.25	1	0.997	0	6.202	217
24/08/2006	8.97	626	0.312	1421	0	1045	25.34	1421	1	421	5.579	1516
25/08/2006	9.45	710	0.284	1706	0.524	34	22.78	1814	0.902	713	5.978	1403
26/08/2006	11.05	608	0.26	1725	0.464	4	25.17	1404	0.786	628	8.08	1508
27/08/2006	8.33	613	0.359	1914	0.039	943	19.68	1707	0.942	620	3.443	2108
28/08/2006	12.04	651	0.32	1746	0.402	2117	27.29	1713	0.8	0	5.782	1412
29/08/2006	12.04	645	0.537	1347	0.042	604	22.84	1344	0.972	658	7.24	1437
30/08/2006	10.81	724	0.785	225	0	23	15.38	33	0.985	2135	4.475	1432
31/08/2006	8.3	638	0.476	1838	0	1854	16.35	1916	0.983	328	6.254	1354
01/09/2006	5.595	647	0.314	1509	0	439	22.78	1636	0.971	651	7.1	1501
02/09/2006	11.09	623	0.241	1538	0.332	618	29.96	1701	0.92	624	5.792	1439
03/09/2006	12.77	627	0.233	1745	0	229	29	1630	0.813	626	3.023	658
04/09/2006	11.59	618	0.322	1525	0.018	911	28.85	1548	0.936	625	4.791	1720
05/09/2006	11.6	600	0.333	1714	0	416	26.25	1732	0.945	604	4.501	1714
06/09/2006	12.6	643	0.12	1559	0.4	735	24.3	1551	0.95	241	8.5	1605
07/09/2006	9	609	0.55	1759	0	1453	18.5	1805	0.98	629	4.8	2346
08/09/2006	8	645	0.41	1641	1	610	22.9	1632	0.98	626	7.2	1859
09/09/2006	12.5	652	0.34	1559	2.1	417	25.5	1636	0.79	415	7	1639
10/09/2006	11.6	650	0.42	1629	0.2	1307	25.4	1527	0.83	651	5.9	1537
11/09/2006	10.1	630	0.23	1612	1	2054	22.3	1538	0.76	631	8.4	1556
12/09/2006	5.4	657	0.22	1448	0.7	1031	21.2	1415	0.78	658	7.3	1702
13/09/2006	2.8	707	0.35	1449	0.1	1018	17.6	1433	0.95	751	8.7	1453
14/09/2006	4	2353	0.65	1752	3.7	2342	9.2	1508	0.98	842	8.4	1023
15/09/2006	3.2	216	0.43	1720	3	958	11.8	1626	0.86	238	8.4	1405
16/09/2006	2.9	809	0.41	1836	2.5	2109	9.7	1504	0.94	2357	9.5	2018
17/09/2006	2.7	641	0.76	1630	0.2	2349	8.2	1605	0.99	459	6.9	30
18/09/2006	5.3	136	0.66	1723	0	1537	12	1718	0.93	816	4.6	246
19/09/2006	0.9	715	0.53	1504	0	322	13	1625	1	810	3.3	1333
20/09/2006	4.5	804	0.7	1649	0	1555	11.1	1715	0.95	813	3.1	1840
21/09/2006	7.1	724	0.7	1643	0	322	12.7	1754	0.96	731	4.3	2251
22/09/2006	6.6	724	0.35	1721	0	1310	16.8	1712	0.91	657	4.5	2225
23/09/2006	4.5	700	0.32	1518	0.8	841	18.5	1511	0.98	626	7.8	1521
24/09/2006	8.9	14	0.25	1648	0.5	2003	18.5	1541	0.83	459	5.2	1556
25/09/2006	8.2	0	0.52	317	0	857	13.1	1548	0.95	824	3.7	355
26/09/2006	4	0	0.74	1509	0.1	1040	9.6	1509	0.97	1243	6.5	1237
27/09/2006	0.7	525	0.57	1302	0.1	634	12.1	1636	0.99	539	5.2	2108
28/09/2006	9	4	0.36	1449	0.8	314	17.6	1331	1	154	9.1	1620
29/09/2006	6.8	717	0.42	1711	0.7	2244	17.2	1456	0.77	718	5.3	1428
30/09/2006	6.1	0	0.58	1540	0	506	15.6	1541	0.98	2030	6.4	1714
01/10/2006	4.1	256	0.56	1439	0.8	2357	12.8	1438	0.98	101	6.6	1442
02/10/2006	2.9	759	0.56	1706	0.3	2158	10.8	1645	0.98	118	5.2	1445
03/10/2006	-0.3	636	0.28	1604	0	636	14.3	1545	0.98	700	5.6	1557
04/10/2006	2	720	0.22	1650	0.7	513	16.7	1546	0.88	724	7.9	1534

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date	avgairtemp	avgRH	avgwindsp(m/s)	avgwinddir	totalppt	totalrad	minbattvolt	timeminbattvolt	cumppt	cumPE	avgwindsp(km/h)
29/07/2006	16.16	0.715	2.78	151.6	0	2.582	12.86	605	718.676	484.1596572	10.008
30/07/2006	12.56	0.954	2.434	216.8	10.92	-0.716	12.9	732	729.596	484.0630878	8.7624
31/07/2006	12.3	0.899	2.212	277.3	8.38	2.073	12.98	610	737.976	484.9163358	7.9632
01/08/2006	12.29	0.775	2.79	215.3	0	13.27	12.99	549	737.976	489.4528816	10.044
02/08/2006	12.39	0.779	1.678	224.2	0	10.42	13.01	544	737.976	492.9974842	6.0408
03/08/2006	13	0.782	2.803	214.2	0.254	8.67	12.98	602	738.23	496.1940135	10.0908
04/08/2006	14.22	0.793	1.733	221.2	2.794	10.27	13	633	741.024	499.7728201	6.2388
05/08/2006	14.57	0.748	1.662	201	0	10.83	12.95	607	741.024	503.6311706	5.9832
06/08/2006	17.16	0.656	2.08	177.7	0	8.89	12.92	607	741.024	507.3412506	7.488
07/08/2006	20.09	0.564	1.603	193	0	12.51	12.86	607	741.024	512.5039353	5.7708
08/08/2006	18.73	0.773	2.085	149.6	2.54	5.157	12.81	611	743.564	514.783879	7.506
09/08/2006	20.37	0.699	2.338	200.4	1.524	8.38	12.84	652	745.088	518.438994	8.4168
10/08/2006	17.97	0.545	2.455	249.1	0	11.99	12.88	611	745.088	523.5978817	8.838
11/08/2006	14.77	0.786	1.569	230	0	2.542	12.86	626	745.088	524.8361574	5.6484
12/08/2006	16.3	0.708	1.977	244.8	0.254	10.1	12.91	616	745.342	528.7198261	7.1172
13/08/2006	17.47	0.65	1.557	190.2	0	11.1	12.91	609	745.342	533.0381349	5.6052
14/08/2006	19.04	0.594	2.597	212.3	0	10.48	12.86	616	745.342	537.6859051	9.3492
15/08/2006	14.69	0.868	2.425	211.5	21.34	1.256	12.85	721	766.682	538.4241625	8.73
16/08/2006	14.27	0.791	3.051	261.8	1.016	7.72	12.99	631	767.698	541.4059583	10.9836
17/08/2006	14.87	0.747	1.544	197	0.254	9.92	12.93	615	767.952	544.9865535	5.5584
18/08/2006	20.2	0.631	2.606	197.6	0	11.15	12.88	615	767.952	549.8144164	9.3816
19/08/2006	16.49	0.655	3.064	259.2	0	10.36	12.82	618	767.952	554.1721534	11.0304
20/08/2006	15.87	0.674	1.644	204.9	0	9.79	12.91	630	767.952	557.9485096	5.9184
21/08/2006	18.35	0.597	2.461	141.2	0	9.37	12.88	621	767.952	562.1467101	8.8596
22/08/2006	21.36	0.549	3.366	136	0	9.07	12.81	627	767.952	566.8939282	12.1176
23/08/2006	15.66	0.842	1.976	260.7	0.508	-1.631	12.77	709	768.46	566.7797782	7.1136
24/08/2006	16.9	0.701	1.718	219.2	0.254	8.77	12.94	646	768.714	570.2467987	6.1848
25/08/2006	16.6	0.584	2.258	251.8	0	9.42	12.85	635	768.714	574.3271405	8.1288
26/08/2006	17.81	0.552	3.398	220.9	0	8.27	12.85	635	768.714	578.5612067	12.2328
27/08/2006	14.6	0.638	1.744	182.6	0	8.51	12.85	618	768.714	581.9738238	6.2784
28/08/2006	19.04	0.566	3.126	146.1	0	6.484	12.88	651	768.714	585.5857495	11.2536
29/08/2006	17.73	0.75	2.648	182.1	0	3.55	12.8	638	768.714	587.4795683	9.5328
30/08/2006	12.47	0.939	2.034	280.4	6.858	-1.846	12.87	724	775.572	587.0711479	7.3224
31/08/2006	11.39	0.785	2.007	277.5	0	4.591	12.95	706	775.572	588.8831798	7.2252
01/09/2006	14.57	0.641	2.659	205	0	8.38	12.97	643	775.572	592.4531856	9.5724
02/09/2006	20.63	0.538	2.329	180.1	0	7.91	12.85	647	775.572	596.4595445	8.3844
03/09/2006	20.97	0.503	1.575	131.8	0	7.64	12.75	639	775.572	600.2286487	5.67
04/09/2006	19.54	0.673	2.016	211.7	0	7.26	12.75	636	775.572	603.4817781	7.2576
05/09/2006	18.89	0.688	2.237	165.9	0	3.932	12.77	659	775.572	605.642374	8.0532
06/09/2006	18.4	0.53	3.2	237	0	6.6	12.8	657	775.572	609.4007831	11.52
07/09/2006	14.1	0.76	2	207	0	2	12.7	715	775.572	610.5777348	7.2
08/09/2006	15.3	0.71	3.5	138	0	6	12.8	656	775.572	613.4171716	12.6
09/09/2006	18.5	0.57	4.2	138	0	4	12.7	655	775.572	616.5092286	15.12
10/09/2006	17.5	0.62	2.6	182	0	4	12.7	708	775.572	618.9223816	9.36
11/09/2006	16.2	0.49	3.7	237	0	5	12.8	652	775.572	622.3347978	13.32
12/09/2006	13	0.49	2.7	256	0	5	12.8	658	775.572	625.2146725	9.72
13/09/2006	9.6	0.73	3.2	196	0	6	12.8	659	775.572	627.650859	11.52
14/09/2006	6.4	0.87	6	85	10	1	12.8	740	785.572	628.4076202	21.6
15/09/2006	6.7	0.69	5.3	32	0	6	13	738	785.572	631.105723	19.08
16/09/2006	5.6	0.71	5.1	72	8	2	12.9	730	793.572	632.5709534	18.36
17/09/2006	5.3	0.88	3	214	8	1	13	751	801.572	633.1021785	10.8
18/09/2006	7.8	0.83	1.8	158	0	2	13	802	801.572	633.9668305	6.48
19/09/2006	7.8	0.81	1.3	174	0	3	13	720	801.572	635.0969882	4.68
20/09/2006	8.8	0.81	1.5	187	0	2	13	722	801.572	635.9901523	5.4
21/09/2006	10.1	0.83	1.7	207	0	1	12.9	959	801.572	636.6051552	6.12
22/09/2006	10.8	0.71	1.7	185	0	3	13	750	801.572	638.0474427	6.12
23/09/2006	10.8	0.69	2.8	215	0	3	12.9	704	801.572	639.7190731	10.08
24/09/2006	12.8	0.51	2.4	260	0	5	12.9	736	801.572	642.445134	8.64
25/09/2006	10.6	0.78	1.6	225	0	0	12.9	758	801.572	642.8650436	5.76
26/09/2006	7	0.87	2.1	244	2	-2	13	746	803.572	642.5696433	7.56
27/09/2006	6.5	0.83	2.4	192	3	2	13.1	717	806.572	643.4567744	8.64
28/09/2006	12.8	0.68	4.3	248	3	1	13	733	809.572	644.922701	15.48
29/09/2006	11.7	0.62	2.4	257	0	0	12.9	723	809.572	645.8486717	8.64
30/09/2006	9.7	0.82	1.6	183	2	1	12.9	849	811.572	646.4669256	5.76
01/10/2006	7.8	0.82	2.5	263	1	2	13	809	812.572	647.4131475	9
02/10/2006	6.2	0.83	1.9	271	0	2	13	733	812.572	648.2534289	6.84
03/10/2006	6	0.75	1.9	187	0	1	13	728	812.572	648.9621827	6.84
04/10/2006	9	0.56	2.9	206	0	2	13	738	812.572	650.6208794	10.44